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**THE MICROFOUNDATIONS OF MIDDLE MANAGER STRATEGIC
INFLUENCE: THREE ESSAYS**

A Dissertation Presented

by

DAVID G. COHEN

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

February 2015

Isenberg School of Management

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**THE MICROFOUNDATIONS OF MIDDLE MANAGER STRATEGIC
INFLUENCE: THREE ESSAYS**

A Dissertation Presented

by

DAVID COHEN

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DEDICATION

I humbly dedicate this work to my wife, Donna, and my children, Ben and Meredith. It seems a small return on the love and support that they have given to me. Or, to use the vocabulary of strategic management, I must insist that in this instance performance bears no relationship to the high value, rarity, inimitability and nonsubstitutability of my available resources.

ACKNOWLEDGEMENTS

I gratefully acknowledge the cooperation and patience of the people who agreed to be interviewed for my research and those who responded to my survey. I also gratefully acknowledge the site for its cooperation.

I acknowledge and thank my committee for their support and guidance, not only during the process of writing my dissertation, but throughout my time in the PhD program. Bruce, Steve, Larry and Andrew have each generously gifted me with knowledge and insight that I will use throughout my career.

I thank my colleagues in the PhD program at the Isenberg School of Management. There are, I am told, PhD programs in which the students do not work together, do not socialize and are not friends. I have no idea why they bother.

Within this group, I am particularly grateful to the management PhD students and candidates; a more supportive (and nicer) group of colleagues it has not been my pleasure to have known. And at the core of this group, I would like to particularly acknowledge the many kindnesses, personal and professional, shown to me by Chris Meyer and Sudhir Nair and the example of professionalism and dedication they set for me, which I endeavor to copy in all respects (other than timeliness).

Finally, my special thanks to Bill Wooldridge for his help, from literally my first day in the program to my last, as teacher, boss, co-author, research partner, Chair, mentor and friend. To say that this dissertation would not have been possible without him is to vastly understate his contribution.

ABSTRACT

THE MICROFOUNDATIONS OF MIDDLE MANAGER STRATEGIC INFLUENCE: THREE ESSAYS

FEBRUARY 2015

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My dissertation is a set of three independent papers exploring both conceptually and empirically the processes by which middle managers influence organizational strategy. Specifically, I examine the hows and whys of middle management strategic influence. By what mechanisms do middle managers change the course of organizational strategy and why do some middle managers, but not others, change the organization's strategic direction? I do so from a perspective of methodological reductionism (that is, I look to the actions of the individual for explanations of organizational level phenomena, such as strategic change). In particular, all three papers explore how an individual middle manager's structural position within the firm interacts with personal characteristics (broadly defined) to explain strategic influence or its absence. As such, I contribute to three different strategy literatures: research examining strategic change (Naranjo-Gil, Hartmann & Maas, 2008); the middle management perspective on strategy process

(Wooldridge, Schmid & Floyd, 2008); and the microfoundations of strategy process (Schmid, Floyd & Wooldridge, 2010).

Although my three papers are tightly tied to my central research question, each paper differs in its focus. My conceptual paper (*The Strength of Moderate Identities: The Microfoundations of Middle Manager Divergent Strategic Influence*) develops a person-situation model of middle management lead strategic change. I suggest that middle managers situated in particular structural positions are more likely than others to be able to change organizational level strategy, but the relevant structural position differs with different strategic types. Even then, properly situated managers' ability to see new strategic opportunities depends upon individual level characteristics.

Because of my interest in the microfoundations of strategy process, my second paper (*Thar She Blows! Middle Managers and the Microfoundations of the Attention Based View of the Firm*) is qualitative, using the perceptions of individual middle managers to elucidate process (the "how" question) and to generate more fine-grained theory. I report qualitatively on three attempts (two successful and one unsuccessful) by middle managers to influence organizational strategic change by directing the attention of top managers to strategic opportunities. I use this research to build theory about the microfoundations of the attention based view (ABV) of the firm; specifically the role of individual middle managers in alerting the firm to environmental change. In particular, I examine the question of how individual structural position and cognition is enlisted to supplement top manager attention. I contribute to the strategy process literature (and specifically to both the ABV and middle management perspective) by using the tools of microfoundations research to work towards an attention based view of middle

management, thus allowing for a richer and more textured understanding of the cogs and wheels of strategic change.

Because I theorize that middle manager strategic influence can be traced back, in part, to structural factors, my third paper is a social network study (*The Microfoundations of Middle Manager Strategic Influence In A High Tech Firm*) focusing on structure and its interaction with personal characteristics. If large firms are information moving and reasoning machines (Ocasio, 1997; Simon, 1947), then an understanding of the processes and routines that lead to strategic change (Teece, 2007) must incorporate an understanding of how information moves through the firm and whether “reasoning” takes place in particular people, as an artifact of organizational routines or both. Tracing these mechanisms to their foundation is part of the microfoundational turn in strategy process research (Schmid, Floyd and Wooldridge, 2010; Teece, 2007; Felin and Foss, 2005). In my third paper I add to this literature (and speculatively to the theory of the firm) by trying to find a link between strategic influence, access to information and behavior in the ego-networks of middle managers in a high tech firm. In particular, in my sample synthesizing behavior has significantly more weight in contributing to perceived influence than any of the other three Wooldridge and Floyd (1992) types of middle management strategic influence. Although the generalizability of this work is limited, it does point towards some interesting areas of future research into how middle managers influence strategy and, more broadly, into the internal processes that lead to strategic change.

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CHAPTER 1

GENERAL INTRODUCTION

In this dissertation, I present three papers examining middle manager strategic influence in partial fulfillment of the requirements of a Doctor of Philosophy degree in Management from the Isenberg School of Management and the Graduate School of the University of Massachusetts Amherst. These independent but interrelated papers each explores, conceptually or empirically, a different aspect of middle manager strategic influence. As required for a PhD, my dissertation demonstrates intellectual competence and maturity in strategic management; makes an original and valid contribution to human knowledge; and is my individual achievement and the product of my independent research. (A copy of my Human Subjects Review Approval Form is Appendix A.)

The questions I have researched are both firmly grounded in the existing strategic management literature and implicate issues currently at the forefront of our discipline. How organizations manage strategic change is one of the fundamental questions of strategic management. Once an organization has left behind its initial entrepreneurial phase, strategy largely becomes a question of continued environmental fit (Venkatraman, 1989). Once the organization reaches a certain level of complexity such that internal and external monitoring has grown beyond the ability of one or a few individuals, strategy development becomes a process of formal and informal routines (Simon, 1997; Floyd & Wooldridge, 2000). This environment/strategy/structure coalignment process (Venkatraman, 1989) is at the root of some of the most important streams of strategy process research, including the top management team literature (Finkelstein, Hambrick & Cannella, 2008), the literature on corporate entrepreneurship, strategic renewal and

incremental strategic change (Dess, et al, 2003), and the literature on strategic response to environmental jolts (Garcia-Sanchez, Mesquita & Vassolo, 2013).

The Middle Management Perspective

The importance of maintaining environmental fit also motivated the development of the middle management perspective on strategy process (Floyd & Wooldridge, 1998). For those researchers who take the position that our conception of strategy must include what the organization does and not simply what it intends to do (Mintzberg, 1978), an accurate description of strategy process as it exists within organizations starts with the ideas that strategy is formed rather than formulated, that strategy formation is a social learning process (Burgelman, 1983a), and that decisions taken by middle managers contribute to the pattern of decisions that are organizational strategy. Our research has also shown that those organizations perform best that most successfully maintain coherence between their functional strategies and overarching organizational strategy (Venkatraman & Prescott, 1990). Maintaining this coherence in complex organizations is a task largely entrusted to middle managers, whose principal job it is to bring the logic of organizational strategy to otherwise diverse functional strategies (Floyd & Wooldridge, 1992). This important middle management role – adjusting functional strategy to better fit organizational strategy – has been the subject of both theoretical and empirical attention (Wooldridge, Schmid & Floyd, 2008).

As important as this role is, however, it is only one of four middle manager strategic roles identified by Floyd & Wooldridge (1992). Developing a two-by-two matrix formed at the intersection of two orthogonal axes, one between integrative and divergent strategic behavior, and the other between an upward hierarchical focus and a

downward hierarchical focus, Floyd & Wooldridge (1992) identified four types of middle management strategic involvement: Implementing Deliberate Strategy (downward/integrative) (assuring that functional strategies fit into the organization's overall strategy); Synthesizing Information (upward/integrative); Facilitating Adaptability (downward/divergent); and Championing Alternatives (upward/divergent). (See Figure 1.) This fourth type, "Championing [Strategic] Alternatives", has received the least empirical attention in the literature. It is this role that two of my three papers focus upon. My third paper, while still focused on middle manager strategic influence, tries to understand how specific middle managers within a single company understand middle manager strategic influence; that is, what are the individual level factors associated with middle managers identified by their peers as influential.

Figure 1-1: A Typology of Middle Management Involvement in Strategy, Adapted From Floyd & Wooldridge, 1992.

		Behavioral	
		Divergent	Integrative
Focus	Upward	Championing Alternatives	Synthesizing Information
	Downward	Facilitating Adaptability	Implementing Deliberate Strategy

Empirical Study of Divergent Strategic Involvement Is Rare

Looking for empirical evidence of upward divergent strategic involvement in the published literature, I examined three overlapping sets of articles. First, I examined the 245 articles citing Floyd & Wooldridge (1992). This first list is overbroad, including articles that are not primarily concerned with the middle management perspective on strategy process or in researching the typology of middle management strategic involvement. Second, using Google Scholar (scholar.google.com), I searched for articles published in peer reviewed management journals containing phrases such as “middle management”, “corporate entrepreneurship” and “middle manager.” This resulted in 52 articles. Finally, as a check against the other two lists, I reviewed the articles discussed in a recent review of the middle management literature (Wooldridge, Schmid & Floyd, 2008).

As a result of this review, I identified 25 empirical articles published after Floyd & Wooldridge (1992) researching middle management involvement in strategy. I then reviewed these articles to identify empirical research into upward/divergent strategic influence or, to use Floyd & Wooldridge’s (1992) terminology, Championing Alternatives. A surprising number of these papers took a formulation/implementation approach to strategy (e.g., Burgelman, 1994; Dutton, Ashford, O’Neill, Hayes & Wierba, 1997; King & Zeithaml, 2001; Huy, 2002). This formulation/implementation dichotomy leads some researchers to classify anything that is not “mere implementation” (Currie, 1999; Boyett & Currie, 2004) as divergent. As implied by the formation conception of strategy (Mintzberg, 1978) that underlies the Floyd & Wooldridge (1992, 2000) typology, however, acting downward, while integrative, allows for middle manager innovation and

autonomy (Floyd & Wooldridge, 1996; Osterman, 2009). Integratively, that autonomy is used to coordinate disparate organizational areas so that they work together in service to existing strategy.

Second, when viewed through the lens of acting upward or acting downward, it was clear that many of the middle managers were acting downward. That is, they were working to change functional strategies to match organizational strategy. In Table 1-1, I have sorted the empirical middle management articles since 1992 into two columns based upon whether the middle managers were working to change the organization's concept of strategy or whether they were working to bring functional strategy into better alignment with organizational strategy. I found that most of the empirical articles published concerned changes to functional level strategy.

Table 1-1: Empirical Research into Divergent and Integrative Middle Management Strategic Involvement.

<u>Divergent</u>	<u>Integrative</u>
Burgelman (1994) Floyd & Wooldridge (1997)	Balogun & Johnson (2004) Boyett & Currie (2004) Carney (2004) Currie & Proctor (2005) Dutton, Ashford, O'Neill, Hayes & Wierba (1997) Dutton, Ashford, O'Neil, & Lawrence (2001) Hornsby, Kuratko, & Zahra (2002) Huy (2002) King & Zeithaml (2001) Kodama (2005) Laine & Vaara (2007) Lines (2005) Mair (2005) Mangaliso (1995) Mantere (2008) Marginson (2002) Meyer (2006) Pappas & Wooldridge (2007) Rouleau (2005) Sillince & Mueller (2006) Vilà & Canales (2008)

In part, the scarcity of this research might be an artifact of a researcher bias against looking for middle manager strategic influence based upon the widely accepted idea that middle managers are not primarily responsible for formulating organizational strategy; that responsibility lies with top management (Hambrick & Mason, 1984). Certainly, it is historically true that management scholars once accepted that top managers formulated strategy and middle managers implemented strategy, and that any deviation by middle managers would reduce performance and was likely self-interested resistance (e.g., Guth & MacMillan, 1986). It is more likely, however, that upward divergent strategic influence is rare in the empirical literature because it is rare in organizations. Why, therefore, do researchers find this phenomenon in only certain times and places, and only among certain middle managers?

Of course, a gap in the literature is not necessarily interesting, either theoretically or empirically. Sometimes a gap indicates a question that leads nowhere, or an answer that is too obvious. As more fully developed in the proposed papers, this particular gap in the literature, however, is interesting because the phenomenon of interest plays out in unexpected ways, adds to our overall understanding of the process by which organizational strategy adjusts to changes in both the environment and in functional strategy, and highlights the tension between the need for strategic change and the need to strategic coherence.

Among other things, upward divergent strategic involvement is interesting because it is on the one hand threatens existing organizational strategy with disintegration, and is thus usually dangerous, and on the other hand can pull organizational strategy towards better environmental fit, and is thus from time to time necessary.

Organizations need a coherent strategy legitimized by top management, suitable for the organization's particular environment and carried out cohesively across functions. In this sense, middle management efforts to change organizational strategy threaten to reduce performance by undercutting this alignment of the external environment and internal resources (Venkatraman, 1989; Venkatraman, 1990). Middle managers, moreover, might not have a comprehensive understanding of strategy across the organization, with the risk that what appears to be an opportunity for the organization within their relatively narrow field of view might be a threat to the organization overall.

On the other hand, within their particular areas of responsibility, middle managers do have greater knowledge of particular aspects of the organization's local environment or resources than top managers. If that knowledge points to the need to change strategy, either to capitalize on an opportunity or to avoid a threat, the organization cannot afford to ignore that need. A well-run organization must, that is, allow for the possibility of middle manager led upward divergent strategic change while, for the most part, maintaining overall strategic discipline.

The Importance of Research into the Microfoundations of Strategy Process

My primary contribution in this dissertation is to bring to the middle management perspective on strategy process recognition of and theory about the implications of organizational and individual heterogeneity for our understanding of the middle management perspective on strategy process. Despite the centrality of strategic change to strategic management as a discipline, little research has focused on the implications of strategic and individual heterogeneity for the processes of strategic change (Schmid, Floyd & Wooldridge, 2010; Wooldridge, Schmid & Floyd, 2008). We are, I submit,

approaching the limits of treating strategy process and managers as homogenous.

Moving forward, our research will become narrower but also more realistic and predictive.

This new focus on heterogeneity requires, in turn, a perspective that builds on the idea of the manager situated within the organization. The emerging research stream on the microfoundations of strategy, on “the underlying individual-level and group level actions that shape strategy and the organization” (Eisenhardt, Furr & Bingham, 2010: 1263), connects processes of strategic change, the research on which has mostly focused on the role of top management (Carpenter 2000), with the middle management perspective. Microfoundations research gives us a more complete and richer understanding of the internal “cogs and wheels” of organizational level strategic change (Elster, 1989:3). In particular, given the relatively limited coherence and cumulative impact of middle management research (Wooldridge, Schmid & Floyd, 2008), bringing microfoundations research to the middle management perspective promises new insights on how organizational strategy is formed.

Axioms I Bring to My Research

Or, at least, so it seems to me. Underlying all of these arguments and each of my papers are a few axiomatic assumptions that I bring to my research. When I look for causal explanations of social phenomena, I tend to look at the level of individual cognition and behavior; I tend, in other words, toward a pragmatic methodological reductionism (Coleman, 1994) that leads me to seek to explain firm-level phenomena “at

the level of structure, behavior and laws¹ of its component parts plus their relations” (Foss, 2011: 3; Silberstein, 2002: 81). This leads to my first axiom: an organizational level phenomenon cannot usually be causally explained by other organizational level phenomena, except as shorthand for well-understood underlying mechanisms (Abell, Felin & Foss, 2008; Coleman, 1994). Researchers can seek to explain firm level phenomena – indeed, explaining organizational performance is the fundamental purpose of strategic management (Schendel & Hofer, 1979) – but firm level phenomena cannot be explained wholly in terms of firm level phenomena (Foss, 2011). Organizations are, reductively, the people within their boundaries and their routinized interactions (Abell, Felin & Foss, 2008). Thus, when I look for causal explanations for middle management led strategic change, I look first at the structure of the organization, by which I mean the people within the firm and their routinized interactions (Moran, 2005). This leads to my second axiom: group behavior is an emergent property of individuals interacting (Coleman, 1994).

Bringing this reductionist approach to strategy formation, I adopt Abell, Felin & Foss’s (2008: 492) idea that “strategic management should fundamentally be concerned about [*sic*] how intentional human action and interaction causally produce strategic phenomena.” I also build on the insights of Eisenhardt, Fur & Bingham, (2010), Lewin & Massini (2011) and Teece (2007) that organizational routines, defined as repetitive,

¹ Of course, this being the social sciences, we must content ourselves with law-like relationships (Tsoukas, 1989).

recognizable patterns of interdependent actions carried out by multiple actors, are fundamental to both strategic stability and strategic change (Feldman & Pentland, 2003: 95). My qualitative paper, in large part, focuses on the interactions of individual heterogeneity with particular organizational routines in building organizational strategy.

As this suggests, microfoundations research is inherently multilevel. Although I am trying to explain a mechanism of strategy formation, an organizational level phenomenon, I focus on individuals embedded within structures – this is, indeed, the thread that ties my dissertation together. Despite my focus on the individual as the fundamental component of the organization, I can still consider strategic differences between organizations. Groups can act in ways that cannot be predicted from the intentions of the individuals within the group (Granovetter, 1978); group behavior is not merely the average of the intentions of the group's members (Coleman, 1994). This implies, however, that speaking of group intent, or mind, or memory, is a convenient shorthand for behavior emergent from the routinized interaction of individuals within the group, and should not be reified as existing separate from the group (Weick & Roberts, 1993).

It is for this reason – my reluctance to reify the group mind – that I reject the idea that strategy exists separate from the organization, formulated by top managers and implemented (or resisted) by middle managers (Guth & MacMillan, 1986; Huy, 2011). As already noted, our understanding of strategy must include what the organization does, not simply what it intends to do (Mintzberg, 1978). Strategy emerges from the routinized interactions of individuals within and across organizations. Middle managers can, through their own autonomous strategic choices, influence these routinized interactions,

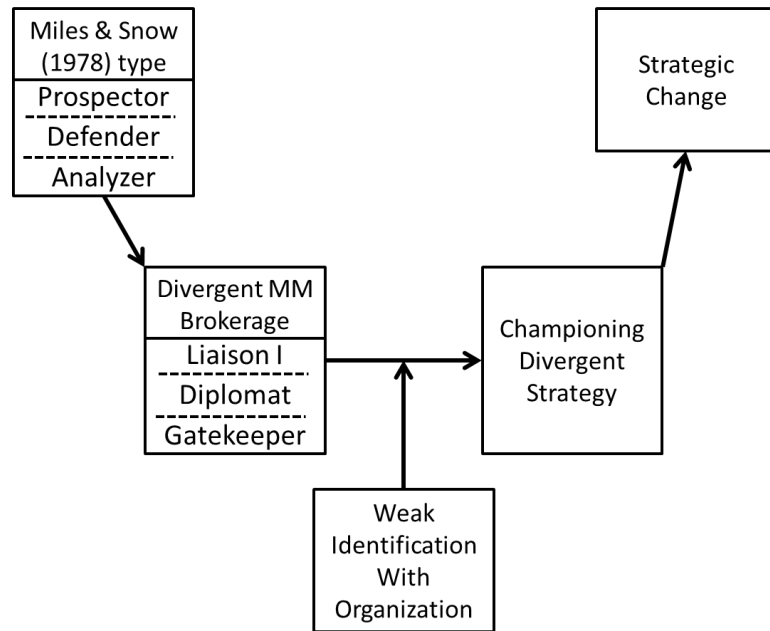
thus influencing the course of organizational level strategy (Burgelman, 1983a; Floyd & Wooldridge, 2000). Routines themselves, for example routine scanning of the firm environment, can lead to change (Feldman & Pentland, 2003). Influencing strategy will, in turn, influence organizational performance, which makes upward/divergent strategic influence an important phenomenon for study.

My Three Papers

The balance of my dissertation is organized as follows. In the first paper, which provides much of the theory motivating this dissertation as a whole, I develop a conceptual model of upward/divergent strategic influence (see Figure 1-2). In this model, I use Miles & Snow's (1978) strategy framework to characterize firm level strategic heterogeneity. The Miles & Snow strategy type indicates where the attention of top managers is focused. For example, in a Defender, top management focuses on maintaining strict control of operational functions and promoting efficiency. Top management is, in other words, focused inward. This implies that a divergent middle manager who sees an opportunity not seen by top managers will be positioned structurally to receive information from outside the organization. Seeing this opportunity will lead the focal middle manager to champion divergent strategy which leads, in turn, to strategy change. However, the likelihood that a middle manager in the proper structural position given the firm's strategy type will champion divergent strategy depends upon the middle manager's ability to recognize the need for strategic change. Because strong identification with the firm promotes relational concerns over instrumental concerns when managers make legitimacy judgments, middle managers with strong organizational identification resist divergent change because it threatens that relationship (Tost, 2011).

On the other hand, middle managers with weak organizational identification will not care. Moderate identification with the firm makes it more likely that a properly positioned middle manager will champion divergent strategy.

Figure 1-2: A Model of Middle Manager Upward/Divergent Strategic Influence.



My second paper is a qualitative study of middle manager led strategic change within a division of a large, high-tech company in the northeast (the “Division”). I report on three attempts (two successful and one unsuccessful) by middle managers to champion organizational strategic change by directing the attention of top managers to strategic opportunities. I use this research to build theory about the microfoundations of the attention based view (ABV) of the firm; specifically the role of individual middle managers in alerting the firm to strategic opportunities and threats. The ABV is founded on the insight that top management attention is a valuable and scarce resources (Ocasio, 1997). Since top managers cannot watch all areas of strategic interest to the firm, I suggest that they rely, in part, on alerts from middle managers. In particular, I examine

the question of how individual structural position and cognition is enlisted to supplement top manager attention. I contribute to the strategy process literature (and specifically to both the ABV and middle management perspective) by using the tools of microfoundations research to work towards an attention based view of middle management, thus allowing for a richer and more textured understanding of the cogs and wheels of strategic change. This paper focuses, in particular, on the how of middle manager strategic influence more than on the why (Ahearn, Lam & Kraus, 2014).

My third paper is a network study of middle managers within the same firm as my second paper. Forty-nine middle managers completed a complex survey of network relationships (formal, informational, advisory and social) and answered questions about their work. They also nominated peers they perceived as able to influence organizational strategy. This gives us the opportunity to quantify, using social network analysis, how their relationships and attributes are associated with strategic influence. Although based on ego-networks and not a basis for generalization, this qualitative network study allows us both to understand in detail how a particular group of middle managers understand strategic influence, and to investigate which middle manager activities (integrating, facilitating, synthesizing or championing), what kind of information (about the environment or internal operations) and what network attributes are associated with strategic influence. At least within these middle managers, this study confirms the importance of both personal attributes and structural position and the sometimes surprising way in which they interact.

CHAPTER 2

THE STRENGTH OF MODERATE IDENTITIES: THE MICROFOUNDATIONS OF MIDDLE MANAGER DIVERGENT STRATEGIC INFLUENCE

Preface to Paper One

There are solid theoretical (Floyd & Wooldridge, 2000) and empirical (Burgelman, 1994) reasons to conclude that middle managers provide important links between a firm's formal strategy and its performance; that middle managers both manage the firm's operations so that they conform to induced strategy and can also contribute to the overall direction of organizational strategy. The empirical evidence, however, has been mixed (Wooldridge, Schmid & Floyd, 2008). In this conceptual paper, I suggest a model of contingent middle manager strategic involvement that takes into consideration organizational and individual heterogeneity. This paper takes account of my "structure, cognition, behavior" model of contingent middle manager strategic involvement.

Introduction

The middle management perspective on strategy process has given us a deeper understanding of how firms change their strategy to improve the fit between their environment and internal capabilities. Managing the firm's strategy is top management's core responsibility, but some firms are too complex for top managers, alone, to supply the necessary attention to all aspects of strategy. Top management focus is often the limiting factor in growth and strategic change in complex organizations (Penrose, 1995; Simon, 1997). Middle managers take up the slack, supplementing top management attention and cognitive resources, primarily by coordinating functional strategy with organizational

strategy and conveying information up and down the organization and across organizational boundaries (Balogun & Johnson, 2004; Floyd & Wooldridge, 2000), but at times by working towards “a redefinition of the organization’s mission and purpose or a substantial shift in overall priorities and goals” (Gioia, Thomas, Clark & Chittipeddi, 1994: 364; Cornelissen, Holt & Zundel, 2011).

Middle managers thus play a crucial role in strategy formation (Mintzberg, 1978; Wooldridge, Schmid & Floyd, 2007), usually integratively (to coordinate dissimilar activities into a coherent organizational strategy) but sometimes divergently (to “alter the organization’s concept of strategy”). Floyd & Wooldridge (1992) identified four middle management strategic roles using a two-by-two matrix defined whether the middle manager is focused up or down the organizational hierarchy, and whether the middle manager is working integratively with existing strategy or divergently. In this paper, I explore the antecedents of upward/divergent strategic involvement aimed at a redefinition of firm strategy.

This type of middle management strategic involvement is particularly interesting for three reasons. First, the effects of upward/divergent strategic involvement are strategically disruptive. Strategic coherence across the firm is performance enhancing and disrupting firm strategy harms performance (Nath & Sudharshan, 1994). This implies that upward/divergent strategic influence threatens firm performance and should be avoided. But upward/divergent strategic involvement can also be performance enhancing. Burgelman (1994) examines Intel’s exit from the memory chip business as a performance enhancing divergent strategic change pushed by middle managers based on what they knew of the environment and Intel’s functional strategies. Floyd &

Wooldridge (2000) illustrate upward/divergent strategic involvement using the fight of a middle manager at Data General Corp. (taken from Kidder, 2000) to substantially change the firm's resources and goals by developing a new microcomputer contrary to the firm's strategic plan. Yet examples of upward/divergent strategic involvement (successful or unsuccessful) are rare in the empirical literature and we do not know how successful firms suppress performance threatening disruption from middle manager strategic involvement while allowing performance enhancing disruption.

Second, as the Intel and Data General examples suggest, upward/divergent strategic change is also interesting because it marks an episode of discontinuous strategic change that is not initiated by top management, thus breaking our generally accepted paradigm of strategy formulation and implementation. We think of organizational strategy as being legitimized by top managers; we seldom think of middle managers as strategic insurgents and certainly not in a good way (Guth & MacMillan, 1986).

Third, upward/divergent strategic involvement is also interesting because of its implications about firm and manager heterogeneity. Much of our research assumes (tacitly or explicitly) that firms are structurally and processually homogenous, and does not take into account the possibility that similarly situated middle managers might differ on their ability and propensity to engage in any of Floyd & Wooldridge's (2000) four types of strategic involvement because of differences between their firms or themselves. In fact, firms can be quite heterogeneous in the ways in which middle managers are allowed to act strategically (Hart, 1992).

What difference do these differences make, if any? We know very little about the implications of firm and middle manager heterogeneity for strategy formation. With

some exceptions (e.g., Mair, 2005), middle management research has not explored the strategy process implications of differences between organizational level strategy types (Miles & Snow, 1978) and among middle managers (Wooldridge, Schmid & Floyd, 2008). In this conceptual paper, I explore the theoretical implications of firm and middle management heterogeneity for the firm's strategy process by focusing on middle management led strategic change in complex organizations. Because it is in this context, where the strategic changes are (by definition) largest that the effects of heterogeneity will be most pronounced.

Specifically, I develop a cross-level model of how middle managers, managers located below top managers and above first-level supervision in the hierarchy (Wooldridge, Schmid & Floyd, 2008), working upward and divergently (Floyd & Wooldridge, 2000) can influence the firm's conception strategy (Burgelman, 1983a, 1994). I explore how organizational level strategic heterogeneity, based on Miles & Snow's (1978) framework of strategic orientation, combined with middle manager heterogeneity in structural position and organizational identification affect the ability and willingness of individual middle managers to bring about organizational level strategic change.

Different strategic orientations (in Miles & Snow's (1978) typology, defenders, prospectors and analyzers) arise from the plans of top managers and path dependent elements of the organization's history. Each strategic type implies that top managers' attention (a scarce resource, Ocasio, 1997) is most productively focused on particular areas vital to its strategy (in Defenders, internal operations, for example). This implies that strategic opportunities and threats that arise in areas perceived as less important to

the organization will first be identified by lower level managers. Because middle managers link organizational strategy with functional strategy, they will be among the first to notice if the organization's formal and functional strategies no longer fit. It is the middle manager who must integrate functional strategy with organizational strategy who is most likely to identify divergent opportunities or threats – those that require strategic change at the organizational level. I also argue that a middle manager's willingness to see the need for change and fight for it depends upon their level of organizational identification. I develop these theoretical thoughts into formal propositions and propose a model of middle manager divergent influence. In so doing, I contribute to the middle management perspective on strategy process and change (Wooldridge, Schmid & Floyd, 2010), and the emerging literatures on the microfoundations of strategic change (Abel, Felin & Foss, 2008; Eisenhardt, Furr & Bingham, 2010; Schmid, Floyd & Wooldridge, 2010).

Strategic management has long focused on organizational level predictors of organizational level phenomena, in particular the determinants of performance, but recently focus has started to shift towards micro level explanations (Floyd, Schmid & Wooldridge, 2010; Hoskisson, et al, 1999; Teece, 2007). Organizational level explanations have been valuable in explaining variability in organizational performance, but macro level explanations are not causal explanations (Abell, Felin & Foss, 2008). Causal explanations often require micro level explanations of macro level phenomena (Eisenhardt, Furr & Bingham, 2010; Foss, 2011; Teece, 2007). This new focus on the microfoundations of strategy allows, among other things, for consideration of both the social psychological basis for groups behavior and the heterogeneity of individuals

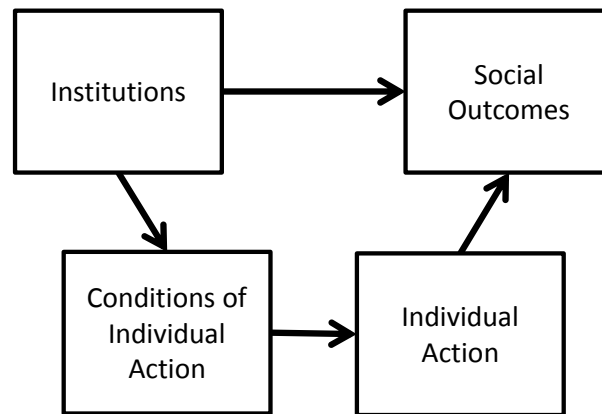
located within the boundaries of the organization (Coff & Kryscynski, 2011; Foss, 2011). These considerations add texture and nuance to our understanding of how middle managers contribute to the formation of organizational level strategy.

The microfoundational approach is particularly apt for research on the middle management perspective on strategy process (Schmid, Floyd & Wooldridge, 2010). The microfoundations approach focuses on individual level factors, which are necessary to explain why similarly situated middle managers have different levels of upward divergent strategic influence (Schmid, Floyd & Wooldridge, 2010). Also, microfoundational explanations build on individual heterogeneity. Though often ignored in the literature, both middle managers and the social structures in which they are embedded are heterogeneous. That heterogeneity is central to my model of upward divergent strategic influence.

Microfoundational work is, inherently, cross-level work. Thus, this paper answers a call in the literature for increased multi-level theorizing (Klein, Tossi & Cannella, 1999). Cross-level models, however, can be confusing and ambiguous to both researcher and reader, and must be carefully delineated to be useful. I therefore have organized this paper around the generic microfoundational model developed by Abel, Felin & Foss (2008). See Figure 2-1. I begin by reviewing the middle management literature. Moving to theory development, I focus first on the institutional level using Miles & Snow's (1978) framework of strategy types. Moving down to the individual level, I argue that relevant conditions of individual action, in this case brokerage roles, will differ based on strategy type. Staying at the individual level, I then consider individual action, here championing strategic alternatives up the firm hierarchy. I end my

theory development moving back to the institutional level, tracing how individual action leads to social outcomes, here strategic change. Finally I discuss my contribution, the implications of my theory for both researchers and practitioners and suggest fruitful avenues for future research.

Figure 2-1: A Generic Model of a Cross-Level Microfoundational Model



LITERATURE REVIEW

The Middle Management Perspective

The defining characteristic of middle managers as a group is that they inhabit the middle of the organizational hierarchy, reporting to top management while supervising operating managers (Floyd & Wooldridge, 1992; Schmid, Floyd & Wooldridge, 2010). This same pattern largely applies to individual middle managers, who are themselves both supervised and supervisors. Their core function is to transmit information up and down the organizational hierarchy, across functional departments and sometimes across organizational boundaries in order to maintain coherence between the firm's overarching strategy, its operations and its environment (Wooldridge, Schmid & Floyd, 2008; Shi, Markoczy & Dess, 2009).

Most often, this is taken to mean that the job of middle managers is to integrate functional strategies into a coherent organizational level strategy formulated by top managers (Raes, et al, 2011). In this case, the activities of middle managers are directed downward: they use the logic of induced organizational strategy to shape functional strategy (Guth & MacMillan, 1986; Floyd & Wooldridge, 2000). In other circumstances, however, middle managers work upward; their central aligning role either requiring them to report to senior management on changing conditions or allowing them to influence the course of organizational strategy to match functional strategy or a changing environment (Burgelman, 1994).

While CEOs and top level managers approve, legitimize and maintain strategic cohesion across the organization and operating managers actualize organizational capabilities (Floyd & Wooldridge, 1996; Wooldridge, Schmid & Floyd, 2008), middle managers, because of their (literally) middle position in the organizational structure mediating between top and functional managers, make the incremental day-to-day adjustments that allow adaptation to a changing environment (Burgelman, 1983b; Floyd & Wooldridge, 1996; Nonaka, 1994). That is, middle managers as a group work both to integrate induced organizational strategy into the overall operations of the firm and to nurture new strategic approaches that diverge from existing strategy (Floyd & Wooldridge, 1996). The range of middle manager strategic involvement (up/down, integrative/divergent) is illustrated in Figure 2-2, adapted from Floyd & Wooldridge (2000).

Figure 2-2: A Typology of Middle Management Involvement in Strategy, Adapted From Floyd & Wooldridge, 1992.

		Behavioral	
		Divergent	Integrative
Focus	Upward	Championing Alternatives	Synthesizing Information
	Downward	Facilitating Adaptability	Implementing Deliberate Strategy
	Lateral		

This middle management perspective on strategy process has done much to flesh out Mintzberg's (1978) insight that strategy is as much formed as formulated; that strategy is a pattern in a stream of decisions taken across the organization. That middle managers are involved in strategy formation, that implementation is more than merely ministerial, is now widely accepted (Wooldridge, Schmid & Floyd, 2008). Case studies highlighting managers' autonomous strategic activities (e.g., Kodama, 2005; Mantere, 2008), as well as theory on how managers identify, champion and sell strategic issues upwards (e.g., Floyd & Wooldridge, 2000; Dutton & Ashford, 1993; Rouleau & Balogun, 2011) have led to theory about middle manager strategic contribution that does not pay sufficient attention to the implications of middle manager and organizational heterogeneity (Floyd & Wooldridge, 1992, 2000). It is not much of an overstatement to say that we have moved from an assumption that no middle manager can contribute productively to the direction of organizational strategy to an assumption that many middle managers actually do so.

This latter assumption, like the former assumption, is overly simplistic. While working downward is not limited to “mere” implementation (Wooldridge & Floyd, 1990), most middle managers spend most of their time seeking to keep disparate functions in line with organizational strategy. Their formal authority flows from top management down to operations, meaning that middle managers working downward are empowered by both the formal levers of organizational authority and the less formal suasion that a more senior organizational member naturally has with more junior members (Rouleau & Balogun, 2011). Working downward, in other words, is inherent in the position of manager and, while some middle managers are no doubt more experienced and more skilled than others, working downward is something that most managers do most of the time (Floyd & Wooldridge, 1992; Guth & MacMillan, 1986).

Reporting upward is similarly inherent in middle managers’ hierarchical position. “Reports”, after all, is a common synonym for subordinates. Reporting can also constitute involvement in strategy (Floyd & Wooldridge, 1992). Those reports help top managers allocate resources and formulate formal or induced strategy (Osterman, 2009). Middle managers allow top managers to delegate secondary strategic tasks while focusing scarce mental resources (Simon, 1997) on the organization’s primary strategic issues.

Working upward to change the direction of organizational strategy, on the other hand, is not inherent in the middle manager’s position. Upward influence is as much dependent upon personal characteristics (e.g., discursive abilities and political skill) as on formal hierarchical position (Dutton & Ashford, 1983; Rouleau & Balogun, 2011). A middle manager trying to work a change in organizational level strategy is, in effect,

overstepping his or her structural position by focusing on (in Miles and Snow's (1978) terms) a primary strategic issue rather than a secondary issue. An influential middle manager does not simply report, but must be able to persuade top managers to focus their attention on a perceived problem and adapt a proposed solution that fundamentally changes the organization's deliberate strategy (Dutton & Ashford, 1983; Wooldridge & Floyd, 1992; Rouleau, 2005). It is perhaps, then, not surprising that, although Floyd & Wooldridge (2000: 54) noted that almost everyone has a story of some important new initiative driven by a middle manager, upward divergent strategic involvement appears only rarely in the empirical literature

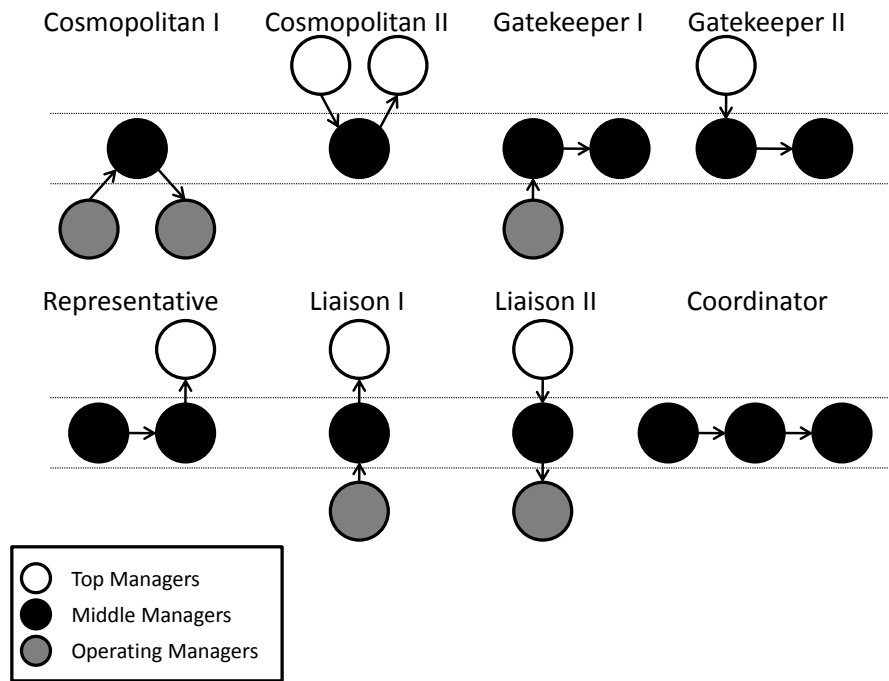
Influential Middle Managers Tend To Be Boundary Spanning Brokers

Middle managers who attempt to exercise upward divergent strategic influence must, first of all, work up; they must have access to top managers. If they have access to top managers, they must then have access to divergent information; information indicating that the current organizational strategy no longer fits (or soon will not fit) the firm's environment or functional strategy, as well as suggestions on how to shift the strategy in order to bring it back into environmental alignment. This implies that middle managers who try to redefine organizational strategy will tend to occupy particular structural position within the firm that give them access both to top managers and to information not otherwise known to top management. In other words, upward/divergent middle managers will tend to be boundary spanning brokers connecting otherwise separate networks across the divide between the organization and its external environment (Pappas & Wooldridge, 2007).

Middle managers as a group broker information between top managers and functional managers (what we might call vertical brokerage) and across organizational boundaries (horizontal brokerage). That these boundary spanning roles lead to organizational innovation and performance is not controversial (Burt, 2005; Pappas & Wooldridge, 2007). The middle manager perspective on strategy process has focused upon brokerage as an important factor in middle manager social capital (see the review and discussion in Shi, Markoczy & Dess, 2009).

While middle managers as a group span boundaries, middle managers as individuals are heterogeneous in their structural position; some are brokers and others are not. This observation leads to the possibility that middle manager structural heterogeneity will affect their strategic role. Previous research has given us a typology of brokerage roles between non-overlapping subgroups (Gould & Fernandez, 1989). Shi, Markoczy & Dess (2009) have taken these generic brokerage role and tied them to the Floyd & Wooldridge (2000) framework, arguing that particular brokerage roles will better suit some of the Floyd & Wooldridge activities than others. Figure 2-3, adapted from Shi, Markoczy & Dess (2009), illustrates these various types of generic brokerage roles in the middle management context using triads in which middle managers connect two top managers, top managers with operating managers, two operating managers or top, middle or operating managers with another middle manager.

Figure 2-3: Middle Manager Brokerage Roles, Based on Shi, Markoczy & Dess (2009)



According to Shi, Markoczy & Dess (2009), the three brokerages most likely to lead to upward/divergent strategic involvement are Cosmopolitan II, Liaison I and Representative middle managers, in each of which the focal middle manager brokers access to a top manager. As Shi, Markoczy & Dess (2009: 1470) note, however, Cosmopolitan II brokers are unlikely to champion divergent strategies; rather a Cosmopolitan II broker provides a pre-implementation screen ensuring that members of the top management team share a single strategic intent.

Middle managers in a Liaison I brokerage, on the other hand, directly connect a top manager with operating managers and more importantly organizational strategy with functional strategy (Shi, Markoczy & Dess, 2009). Moreover, Liaison I brokers have a multitude of structural “holes” to fill, as hierarchical status and the institutional role of middle managers works in their favor with respect to operating managers. That is, it is

unlikely that a link will develop directly between a low level manager and a high level manager; linking these hierarchical levels is a natural role for middle managers. At the same time, this is a particularly valuable brokerage role. Burgelman (1983a) found that operations are a fertile ground for strategic innovations. Liaison I brokers, like the middle managers at Intel, can exercise upward divergent strategic influence by bringing divergent information from the functional levels of the organization to top managers in order to change organizational strategy to better fit functional strategy. In this case, championing often requires issue selling, in that the middle manager must convince top management to pay attention to a functional issue, though here the issue is needed change in organizational strategy rather than additional resources or a change in functional strategy (Dutton, Ashford, O'Neill & Lawrence, 2001).

Representative brokers connect a top manager with another middle manager. Representative brokers, too, can have a multitude of structural holes to fill, given that there are many middle managers to every top manager and that middle managers (although usually lumped together theoretically) can be found on numerous hierarchical levels in a complex firm. As important, the link between middle managers in a Representative brokerage can cross internal firm boundaries, allowing the focal middle manager to bring information to the top manager to which he or she would not usually be exposed. Tom West, the focal middle manager driving Data General's development of a new microcomputer (Kidder, 2000) made a point of soliciting information from other departments of the company, including sales, to build his case to top management.

Finally, although the Shi, Markoczy & Dess's (2009) typology is a valuable contribution to understanding how middle managers contribute to organizational strategy,

it does require an extension. Shi, Markoczy & Dess (2009) assume that individual managers affiliate with particular networks based on their organizational hierarchy level; that is that middle managers see themselves as different from low level managers and top level managers. This is another way of assuming that middle managers are homogenous other than for their structural position, and that one middle manager, assigned to bridge a particular gap, makes the same strategic contribution that would be made by any other middle manager in that same position.

Because the hierarchical positions assigned to middle managers by the organization are intended to further the organization's existing strategy, strategic influence will not arise from structural characteristics alone. That is, strategic involvement or contribution might flow from formal organizational positions in a formulation/implementation model, but that very model curtails the opportunity for a middle manager to have strategic influence.

More importantly, the eight brokerage types adopted to middle managerial structural position by Shi, Markoczy & Dess (2009) ignore what might potentially be the most important brokerage of all: brokerage of information from the external environment. Perhaps as an artifact of their reliance on the Gould & Fernandez (1989) brokerage typology, all of the sub-categories that make up the Shi, Markoczy & Dess (2009) typology are all internal to the organization. Middle managers, however, can also bridge gaps between their organization and its environment (Burt, 2005; Pappas & Wooldridge, 2007). Given the importance of both environmental fit and functional/organizational strategic fit to firm performance (Venkatraman, 1989), a middle manager with access to a unique source of environmental information (for example, to a

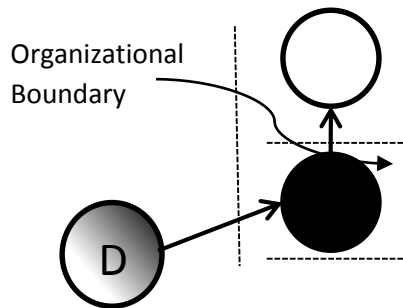
supplier, a customer, or an industry working group) might well be in a position to use that brokerage to influence organizational strategy. One further type of middle management brokerage is thus necessary, the Diplomat brokerage (Figure 2-4).

Without adding the Diplomat brokerage, the Shi, Markoczy & Dess (2009) typology does not allow for new information about the environment to enter the organization through middle management brokerage. This is not only contrary to prior research showing new information being brought to the firm by middle managers (e.g., Burgelman, 1984) but would also suggest that, over time, all relevant information would circulate throughout the firm, with the result that there could be no more brokerage.

The key to this brokerage role, and what differentiates it from the Shi, Markoczy & Dess (2009) brokerage types, is that it spans two different types of boundaries. It spans a hierarchical boundary in that the middle manager links to a top manager but it also spans an organizational boundary. The Diplomat is linked to another manager who can be of any hierarchical level, but must in a different organization. Because the Diplomat is familiar with both a particular aspect of the firm's functional strategy and must work to align that strategy with overall strategy, this brokerage role can be powerful. For example, Intel's exit from the memory chip business was based, in part, on information received by middle managers from managers at suppliers, including the makers of "fabs", the machines that manufacture computer chips, managers who had previously worked for competitors, and from customers (Burgelman, 1994). The information they brought to Intel made clear that Intel's functional strategy (how it made memory chips) could not be squared with its organizational strategy (to allocate resources based on Intel's return on investment), forcing strategic change. My conception of the

Diplomat broker as an agent of divergent change is an amplification of Burgelman's (1994: 49) proposition that: "In dynamic environments, actions of middle-level managers that diverge from official corporate strategy may signal important changes in external selection pressures." I suggest that important changes in external selection pressure will lead middle-level managers linked to the external environment to champion actions that diverge from formal corporate strategy.

Figure 2-4: A Middle Manager Acting as a "Diplomat" Brokers a Connection from a Manager of any Hierarchical Status Across an Organizational Boundary to a Higher Level Manager



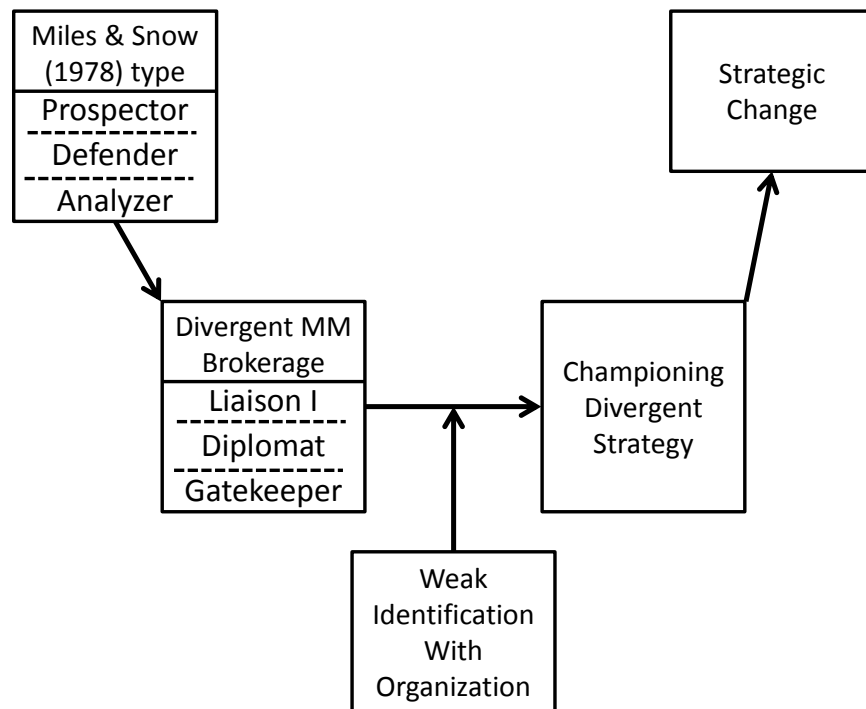
THEORY DEVELOPMENT

In this section, I develop a model (set forth in Figure 2-5) detailing how the firm's strategic type (Prospector, Defender or Analyzer) determines which brokerage position is most likely to lead to upward/divergent strategic involvement in that firm. I then consider how other network characteristics of individual middle managers interact with their structural position to determine which managers are most likely to exercise upward divergent strategic influence on organizational level strategy for each strategy type. Mine is, in other words, a contingent person-situation interactionist model in which the

“situation” is brokerage position within a firm’s internal network, the contingency is the firm’s strategic type, and the person is the focal middle manager.

I first match brokerage roles with strategic type based on Miles & Snow’s (1978) strategy process framework. Next, I argue that, even if located in the right brokerage role given the firm’s strategy type, a boundary spanning middle manager is not likely to exercise upward divergent strategic influence so long as that middle manager has a strong sense of organizational identification, such that the organization’s self-conception (Burgelman, 1994) merges with the middle manager’s self-conception, limiting the middle manager’s cognitive ability to recognize the need for change because the potential change challenges the manager’s relationship with the firm (Ren & Guo, 2011; Tost, 2011). Such middle managers are unlikely to try to redefine firm strategy because their self-conception leads to biases, assumptions and presuppositions about the correct organizational strategy (Hamel & Prahalad, 1994: 563).

Figure 2-5: A Person-Situation Interactivist Model of the Microfoundations of Middle Management Upward, Divergent Strategic Influence.



Organizational Level Heterogeneity Effects the Structural Position of Divergent Middle Managers

An organization's articulated purpose is its overarching strategic logic, or organizational level strategy. Its "established mechanism" for achieving its purpose is its operating or functional strategy. As Miles & Snow (1978) recognized, purpose and mechanism are interdependent, each shaping the other. Management's strategic choices shape the organization's structure and process while at the same time structure and process constrain strategy (Burgelman, 1983a; Miles & Snow, 1978: 7). In other words, organizational strategy shapes functional strategy, but functional strategy can also shape organizational strategy. It is the foundational role of this adaptive cycle in Miles & Snow (1978: 21) that makes it an apt frame for considering upward divergent middle management led strategic change.

The mutual constraint imposed by the adaptive cycle suggests that organizational and functional strategy must be coordinated, a task that falls largely to middle managers (Floyd & Wooldridge, 1992). No strategy can succeed that is beyond the power of the organization's operations nor is there value in operations that do not serve the firm's strategy. Unless they are to be completely static, strategy and operations must continue to co-evolve in an adaptive cycle (Burgelman, 1983b; Mintzberg, 1978). Thus, the interdependence and iterative development of any given organization's solutions to the entrepreneurial problem (what should be the firm's overarching strategy, given its capabilities and environment), the engineering problem (what capabilities does the firm need to execute its strategy within its environment), and the administrative problem (how does the firm continue to evolve to meet new challenges while maintaining overall strategic coherence) (Miles & Snow, 1978).

The administrative problem is, through the lens of the middle management perspective, the coordinating role played by middle managers between organizational strategy and operating strategy (Floyd & Wooldridge, 2000). Middle managers are the link between top management and operating management, which means that they are also the link between organizational strategy and operating strategy. In short, middle management strategic involvement allows the coordinated evolution of the firm's strategies and capabilities to better fit an evolving environment (Burgelman, 1983b, 2004; Teece, Pisano & Shuen, 1997). The relationship between the engineering and the entrepreneurial problem varies across organizations, and thus the administrative problem varies as well. Miles & Snow (1978) reduced this variance to four archetypal organizations, Defenders, Prospectors, Analyzers and Reactors. Because strategic

orientation and top manager attention differs across these archetypes, the nature of middle manager integrative and divergent strategic involvement will also differ between Defenders, Prospectors and Analyzers,² as set forth below and summarized in Table 1-2. The core of my argument here is that top management focus differs across these archetypes and, thus, middle management focus – and the structural position of middle managers championing divergent strategic change – also differs across the archetypes.

² Following the examples of both Miles and Snow (1978) and Floyd and Wooldridge (2000), I do not analyze the middle manager role in Reactors, who in effect do not have coherent answers to the entrepreneurial and engineering problems.

Table 2-1: Middle Manager Integrative and Divergent Strategic Involvement by Miles & Snow (1978) Strategic Type.

	Defender	Prospector	Analyzer
Organizational Strategy	To "seal off" a portion of the market, allowing for a stable set of products and customers over time.	To locate new products and market opportunities.	To locate new products and market opportunities while simultaneously maintaining a stable and protected core market of traditional products and customers.
Functional Strategy	To run the day-to-day operations of the firm as efficiently as possible, through the use of stable and established technology, a tendency towards vertical integration, and continuous incremental improvement.	To avoid long-term commitment to a single technology, using multiple, flexible technologies and a low degree of routinization.	To be efficient in the stable portions of the organization's operations while being flexible in the new or changing portions.
Top Management Focus	Top management focuses on operational efficiency and protecting the firm's niche from new entry.	Top management focuses on the search for new markets and new capabilities.	Top management focuses on quickly entering new markets pioneered by Prospectors while using financial controls to ensure efficiency in its core operations.
Integrative Role of Middle Managers	Managerial attention at both the top and middle is directed inward and downward rather than outward.	Middle managers must focus on working downward to integrate diverse operating strategies into a coherent organizational level strategy.	The peculiar challenge for middle managers in an Analyzer is to enforce the segregation of functional strategies between core functions and new ventures.
Divergent Role of Middle Managers	Proposing based upon information from across the organizational boundary that the firm modify its functional strategy, move into a related market or change its core product	Proposing based upon limitations in functional strategy that the firm exits an established market.	Proposing based on information from new ventures that the firm change a core product or exit a core market (e.g., Burgelman, 1994).
Likely Brokerage Position for Divergent Middle Managers	Diplomat (divergent strategy based upon information from across an organizational boundary)	Liaison I (divergent strategy based upon information about functional strategies)	Representative (divergent strategy in core market based upon information from a new market)

Defenders produce a narrow range of products within a protected market niche.

Their main strategy focus is on maintaining stability in their strategy, processes and environment while avoiding competition. Performance for a Defender is the result of maintaining its price level while decreasing its costs. It does this by working at an industry level to protect its niche, mostly by maintaining government restrictions to entry while working internally to improve the efficiency of its operations (Efrat & Shoham,

2013). Because Defenders value stability, the scope for upward divergent middle manager strategic influence is inherently limited (Floyd & Wooldridge, 1992).

Given the nature of Defenders, top managers focus their attention on the two keys to firm performance: limiting competition in their niche and on working to drive inefficiencies out of the firm. Top management pays little attention to other firms, since they are not a key to success. Middle managers, on the other hand, must pay attention to other firms and thus must pick up the cognitive slack. In Defenders, it is the middle manager who is most likely to learn of new improvements elsewhere that can be adopted to the firm's functional strategy, new markets aligned with the firm's niche, or new features that might be added to the firm's core product. Because of the nature of Defenders, this information is more likely to come from outside the firm than from other functional departments within the firm. For this reason, middle managers in Diplomat brokerages are most likely to have the combination of external information and internal knowledge allowing them to suggest upward/divergent strategic change. Of course, given the nature of Defenders, this effort will rarely succeed. Thus, top managers are willing to cede this role to middle managers because they know that Defenders will usually ignore events outside their existing domain, implying that middle managers will have limited ability to upset strategic coherence

Proposition 1: In Defender organizations, upward/divergent middle management strategic involvement is more likely from those managers occupying Diplomat brokerage roles in the firm than from managers in other brokerage roles or with no brokerage role.

Prospectors occupy the opposite extreme of a strategic continuum from Defenders (Floyd & Wooldridge, 1992). Prospectors are continually looking to use their existing resources and capabilities to enter new product markets and exploit new environmental opportunities (Miles & Snow, 1978). Thus, firm performance for Prospectors is tied to finding new markets for the Prospector to explore while exploiting its existing resources. Because of the importance of new markets to firm performance, top managers focus outside the firm, looking for new opportunities to exploit and new technologies to adopt.

For Prospectors, change is predictable and top managers assume that middle managers will have to adapt regularly to new environments and new technologies. The importance of change causes Prospectors to seek functional flexibility by avoiding routinization and long term commitments to a single technology (Bentley, Omer & Sharp, 2013). This puts a heavy burden on middle managers, who in their primary integrative roles must focus on promoting coherence in the midst of flexibility. Given a regularly changing product mix across the firm, middle managers must integrate the firm's diverse products and technologies into an overarching strategy. As a result, in Prospectors most middle managers will focus on their integrative role as Liaison II brokers – a middle manager connecting a top manager with an operating manager. What in Defenders is a key role of top managers, assuring operational efficiency, is delegated to middle managers in a Prospector while top managers focus on finding new market niches, a role all but irrelevant to top managers of Defenders. Because top managers are already looking to make connections with the external environment, middle managers in a Diplomat brokerage are unlikely to influence organizational strategy because they are

unlikely to be the first organizational member to come across new information from the external environment.

Because, on the other hand, top managers in Prospectors are not overly concerned with efficiency in functional strategies, which after all will soon change, they are willing to delegate authority over internal routines to middle managers while focusing on the environment. Any new information with strategic relevance will, most likely, come first to the attention of a middle manager brokering the link between functional and top managers, a Liaison I broker. In a Prospector, divergent middle manager behavior is more likely to arise from a Liaison I brokerage using information from operations to change organizational level strategy. For example, Data General's development of a new microcomputer (Kidder, 2000) is an example of a middle manager realizing that internal operations could support development of a new strategy (direct competition with Digital Equipment Corporation) that top management did not support.

Proposition 2: In Prospector organizations, upward/divergent middle management strategic involvement is more from those managers occupying Liaison I brokerage roles in the firm than from managers in other brokerage roles or with no brokerage role.

Analyzers combine certain characteristics of Defenders and Prospectors. The bulk of their profits come from a few established market niches in which, Defender-like, they have stable operations and routines, but they also actively look for opportunities to follow Prospectors into new markets. Top managers in Analyzers focus on the environment in their search for new opportunities for ventures, but unlike Prospectors, they are content to be second-movers, allowing Prospectors to identify new niches (and

take the concomitant risk). Like Defenders, and unlike Prospectors who accept somewhat chaotic functional strategies, Analyzers enforce internal efficiency using strict financial controls to monitor the firm's core activities. Unlike Defenders, of course, they are always looking to move into a new (but not unproven) market.

Analyzers are more risk averse than Prospectors while being more willing to take a risk than Defenders. They tend to require more rigorous analysis before making a strategic change. They are thus more dependent on middle managers than either Prospectors or Defenders, but those middle managers are expected to focus on the particular part of the organization they inhabit. That is, Analyzers do not want their new market products to affect their Defender-like established businesses (Floyd & Wooldridge, 1992). Instead, Analyzers rely on integrative middle managers to maintain strategic coherence by separating their Defender-like processes from their Prospector-like processes.

As a result, top managers in Analyzers are paying attention to both the external environment and to the efficiency of the firm's internal processes. Indeed, integrating functional and organizational strategy – usually a core middle management function – is in Analyzers a matter to which top managers pay attention, using strong financial controls to enforce both efficiency and a separation of the firm's different businesses. Nevertheless, there will be middle managers who can broker information between the Analyzer's different businesses. A divergent middle manager in an Analyzer is likely to be a Representative broker using information from one side of the firm (i.e., the Defender-like exploitation business or the Prospector-like exploration business) to champion strategic change in the other side, breaking the separation top managers value.

Consider, for example, a firm with a dominant position in a business-to-business market that expands into a related consumer market. The firm realizes that the product must change to better suit consumers' needs, but wishes to prevent change in its Defender-like commercial market. A Representative middle manager who sees that a particular change made in the consumer market would also be beneficial in the commercial market would need to engage in upward divergent strategic behavior to change the firm's commercial strategy.

Proposition 3: In Analyzer organizations, upward/divergent middle management strategic involvement is more likely from those managers occupying Representative brokerage roles in the firm than from managers in other brokerage roles or with no brokerage role.

Influential Middle Managers Have Only Moderate Identification with Their Organizations

Propositions 1 through 3 (and Table 2-2) set forth my argument that, depending upon strategy type, Liaison I, Representative and Diplomat brokers are more likely than other middle managers to recognize strategic opportunities or threats not seen by top managers and engage in upward/divergent strategic involvement. But these structural circumstances will not have a direct effect on divergent strategic change; the opportunity is there in the form of divergent information but the ability to recognize that opportunity might not be. If strategy is the pattern in a stream of decisions (Mintzberg, 1978), then upward divergent strategic influence depends upon the willingness and ability of middle managers to disrupt that pattern.

For the reasons set forth above, this is often structurally difficult – whatever the organization’s strategy type, a middle manager who sees a strategic opportunity or threat and champions a change in strategy will be doing so from a source top management believes is not critical to organizational strategy. But it is difficult for another reason; a middle manager seeking to change the organization’s concept of its strategy is also seeking to change the organization’s concept of itself and what it does; that is, its identity. A small change will not be problematic, and even a large change can be justified retroactively (Burgelman, 1983a), but a large change in strategy can also be a large change in identity, and people resist changing their identity. Some middle managers will not only be reluctant to change the organization’s identity but will, as a result of cognitive bias, be unable to see the need for change (Ren & Guo, 2011). A middle manager strongly committed to the organization’s current identity will be emotionally primed not to press for divergent change, even if that middle manager occupies the right kind of brokerage role to affect strategic change given the organization’s strategy type. An upwardly divergent middle manager must, in other words, not only be positioned to see the need for change but must also be willing to concede that need. As a result, the relationship between brokerage role and strategic influence will depend upon the emotional valence the organization’s identity has for a given middle manager (Burgelman, 1994).³

³ To successfully exercise upward divergent strategic influence, a middle manager must also be politically adept. This important point is sufficiently developed in the middle management

This ability to see the need for change will be compromised in managers committed to maintaining the organization's existing identity. Organizational identification has important cognitive effects on managers (Ren & Guo, 2011; Tost, 2011). Organizational identification, the sense of belonging to an organization (Mael & Ashforth, 1992), reduces subjective uncertainty about our own and other people's perceptions, attitudes, feelings and behaviors, and ultimately about our self-concept and place within the organization. Uncertainty reduction is a core human motivation (Hogg & Terry, 2000), which implies in turn that organizational identification is a key driver of our understanding of our place in the world, how we should behave in a given situation and how we can expect others to behave. Strong organizational identification can lead to biases, prejudices and presuppositions that effect the manager's evaluation of the legitimacy of divergent strategic alternatives (Dukerich, Golden & Shortell, 2002; Tost, 2011). As a result, middle managers might reject possible opportunities because they do not align with the existing strategic orientation of the firm (Ren & Guo, 2011). Organizational identification can be homogenizing or isomorphic forces that leads to conformity within the organization. A strong organizational identity helps promote strategic coherence but also leads managers to resist strategic change.

Though there is a long and active literature noting the importance of organizational identification for both the organization and the individual embedded

literature (e.g., Floyd & Wooldridge, 2000; Wooldridge, Schmid & Floyd, 2008) that I will not belabor it here but will treat it instead as outside the scope of this paper.

within the organization (see Ashforth, Harrison & Corley, 2008: 326 for a review of this literature), what has perhaps not been noted is the overlap between organizational strategy and organizational identity. Strategy is what the firm does, and what the firm does forms its identity. Of course, in order for a strategic change to trigger this type of bias, it must be sufficiently large to threaten the organization's identity in the minds of middle managers. I am simplifying my theoretical context by assuming that the line between integrative and divergent strategy is also the line at which managers can rationalize a change in terms of existing strategy (integrative) or find it threatening (divergent), but it seems likely that the bigger the change, the greater the threat.

Burgelman (1994: 41) focuses on managers' emotional attachment to memory chip manufacturing as the foundation of Intel's success as part of the inertial force that stopped Intel from exiting that business as soon as it should have done. Managers across the organization, including Gordon Moore, thought of Intel as "the memory chip company." One middle manager compared Intel's decision to get out of the memory chip business to "Ford deciding to get out of cars." Another said that the time leading up to the exit was emotional and that "it was difficult to be rational." Ansoff (1979: 188) noted that strategic change is cultural change and that cultures resist change. CEOs are so closely intertwined with existing organizational strategy that they often resist needed strategic change and must be replaced before firm's can implement disruptive strategic change (Tushman, Newman & Romanelli, 1986).

If CEOs fear that their self-identity will be undermined by a major change in organizational strategy to the extent that they dismiss or ignore warning signs of impending environmental change (Bouchikhi & Kimberly, 2003), middle managers are

no better off. Middle managers, no less than CEOs, identify with their firm and build their self-identity around organizational strategy. Middle managers, who are assigned specific duties and responsibilities by senior management, are structurally constrained in the strategic focus. Even those middle managers who see the warning signs of impending change may ignore those warnings because they are as resistant to fundamental change to the organizational level strategy as they would be to fundamentally changing their self-identity (Ren & Guo, 2011).

Because top managers are so identified with organizational strategy and because middle managers are closer to customers and suppliers, who often see new opportunities first (Teece, 2007), it is critical for the organization to have at least a few middle manager brokers with only moderate organizational identification. (Middle managers with low or no organizational identification might see the need for change, but not act on that need.) This might seem somewhat at odds with research suggesting that motivation depends upon inculcating employees with the organization's "norms, value and culture" (Coff & Kryscynski, 2011). We must be careful, however, not to conflate organizational identification with commitment to the organization or motivation to work for change.

Organizational identification is conceptually and empirically distinct from related micro-organizational constructs, such as organizational commitment. Riketta's (2005) meta-analysis comparing organizational commitment and organizational identification found that these were two distinct constructs. Commitment correlates more closely with job satisfaction, intent to remain and absenteeism, while identification correlates more closely with organizational citizenship behaviors and job involvement. In other words, a middle manager with only moderate organizational identification is not necessarily an

uncommitted manager, a lazy manager or poor manager. Instead, he or she is simply a manager who has not linked his or her organizational membership to his or her self-concept (Herrbach, 2006: 630; Riketta, 2005: 361). This relatively weak identification implies that the cognitive biases tied to organizational identification are also moderate (Mukherjee & He, 2008; Riketta, 2005).

Thus, a middle manager with only moderate organizational identification will be less threatened than other middle managers by the possibility of organizational change, and more willing to judge possible change instrumentally. This implies that the relationship between brokerage role and strategic influence is dependent upon organizational identification, and that this dependence is curvilinear. Even if correctly placed, a middle manager with high emotional valence on organization identity will not be able to conceive of strategic change; a middle manager with very low emotional valence on organizational identity will not care. Upward divergent middle managers will tend to have organizational identification somewhere in the middle.

Proposition 4: The relationships between brokerage type and upward/divergent middle management strategic involvement set forth in Propositions 1, 2 and 3 depend upon organizational identification in a curvilinear relationship such that middle managers in the proper brokerage role for their organization's strategy type (i.e., Defender/Diplomat, Prospector/Liaison I, Analyzer/Representative) are less likely to engage in upward/divergent middle management strategic involvement if their identification with their organization's current strategy is low or high and more likely to engage in upward/divergent middle management strategic involvement if their organizational identification is moderate.

Discussion And Conclusion

In this paper, I delineate the theoretical “cogs and wheels” (Elster, 1989: 3) underlying a particular type of middle management led strategic change. I suggest that, in order to understand the contributions middle managers make to organizational level strategy formation, we must understand the circumstances in which middle manager strategic involvement takes different forms. Focusing on upward divergent strategic influence, I suggest that organizational and middle manager heterogeneity help predict which middle managers are likely to influence organizational level strategy.

This heterogeneity comes in two types: structural and personal. Depending upon the organization’s strategy type, middle managers in Liaison I, Representative or Diplomat brokerage roles are more likely than other middle managers to try to redefine organizational strategy. Personally, middle managers who have relatively moderate organizational identification, and thus are more likely to see gaps between organizational level strategy, on the one hand, and the environment or functional strategy, on the other hand, are more likely than other middle managers to engage in upward divergent strategic influence.

The strengths of this approach are the strengths generally arising from the movement to study the microfoundations of strategy. As discussed above, even empirical work on the middle management perspective tends to assume, implicitly or explicitly, that middle managers are largely homogenous, that the tools of strategy formation are equally available to all, and that any given middle manager is as likely to work upward as downward, and to work divergently as integratively. Once we relax this assumption of homogeneity, our models of middle management strategic activity become at once more

realistic and more granular. Wooldridge, Schmid & Floyd (2008) began their review of the middle management literature by noting that the middle management perspective has not developed as a coherent or cumulative body of theory when compared to other strategy process perspectives, particularly the top management team perspective (Hambrick & Mason, 1984). One possible explanation for this phenomenon may be that not only has the top management perspective explicitly dealt with heterogeneity within top management teams (Alexiev, et al, 2010; Carpenter, 2002), but that middle managers, who are much more numerous than top managers, are also more heterogeneous than top managers, not only in terms of structural position but also in terms of the demographic, functional and background factors shown to be relevant to performance (Van Knippenberg & Schippers, 2007).

I have also contributed to our nuanced understanding of the roles played by middle managers in strategy development. As these roles (synthesizing, championing, integrating and facilitating) have developed, there has been little attention paid to the antecedents of each role separately. In other words, why is a focal middle manager likely to participate in one type of strategic activity but not in the others? How do the roles differ in the knowledge needed for one rather than another? These questions, which are tied to issues of individual and organizational heterogeneity, are explicated in this research. It is generally recognized that we need to bring individual heterogeneity into our understanding of middle managers strategic involvement (Wooldridge, Schmid & Floyd, 2008), but this is true not only as to which middle manager will work to effect strategy, but also as to which role a particular middle manager will use.

This paper thus contributes to our understanding of the microfoundations of strategy and to the middle management perspective on strategy process. The microfoundations of strategy literature is relatively recent (Abel, Felin & Foss, 2008; Foss, 2011; Teece, 2007) and I contribute not just an additional model of another strategic phenomenon, but also a way of thinking about microfoundations rooted in the person-situation perspective of social psychology. Similarly, I contribute to the middle management perspective not only a new model of upward, divergent strategic influence, but also a new, more particular and granular way to think about middle managers, the relevant distinctions between individuals, and how they contribute to strategy formation that is still positivist and generalizable. Finally, I contribute to our understanding of strategic human capital by modeling particular set of “cogs and wheels” by which heterogeneous human capital leads to a change in organizational level strategy.

The great strength of this model, its particularity, is also its weakness. This is not a theory that explains, or purports to explain, all of strategic change or even all the ways in which middle managers are involved in strategy. There are at least three more sets of causal mechanisms leading from opportunity to organizational exploitation in the Floyd & Wooldridge (2000) typology, not to mention the mechanisms for turning opportunity into performance that are not specific to the middle management perspective. Even here, the general form of my model – seeking causal explanations in the combination of structural and personal heterogeneity – might be useful in guiding future research into other types of strategic change.

My model has other implications for future research. First, as noted, it opens the way for future theory explaining the causal mechanisms leading to other types of middle

management strategic involvement, as well as other types of organizational level strategic change. At the same time, the idea that strategy process literature generally and research on the middle management perspective specifically, should focus on individual level explanations of organizational phenomena – that is, the microfoundational project – suggests a number of fertile areas for future empirical research. To fully understand the microfoundations of strategy, we need qualitative research, and particularly grounded theory (Eisenhardt, 1989), to show us what these “cogs and wheels” look like *in situ* and how they are experienced by the middle managers involved. Qualitative work will, in particular, give us greater insight into the political dimensions of upward/divergent strategic behavior. On the other hand, because strategy is, as a field, largely aimed at positive and generalizable explanations of organizational phenomena, there is a real need for quantitative research that can help explicate individual level actions. The important role played by structural position and brokerage roles might indicate that network analysis will play a particularly important role as this research advances.

This model also has implications for practitioners. Whether strategy formulation in a particular organization is centralized or decentralized is itself an important strategic choice. As Hart (1992) observed, performance suffers at both extremes; where middle managers have no role in strategy formulation and where they have too much strategic influence. At least in part, my microfoundational model explains this phenomenon; strategic innovation can come from the core or the periphery; foreclosing the possibility of either limits that organization’s strategic options. Similarly, my model suggests a path to performance enhancing strategic change that might strike practitioners as counterintuitive. It is valuable to have influential middle managers who are not wedded

to current strategy; in moderation, dissenters are productive because they can see what top and middle managers who are more identified with the organization will not see. Where the organizational identification literature sees high levels of identification as good, I suggest a particular situation in which weaker identification is good.

In conclusion, I wish to comment on how this paper, and more generally microfoundational explanations of organizational phenomena, fit into the existing body of strategic management research. As I noted above, strategic management has generally been focused on the organizational level. Our characteristic dependent variable, performance, is an organizational level variable and most of our explanations of performance have also been at the organizational level. There is, on the other hand, a temptation and tendency to understand microfoundational explanations as being solely focused on the individual level. Certainly, the microfoundations project is both reductive and based on methodologically individualism (Abel, Felin & Foss, 2008). But it need not be entirely reductive, nor is methodological individualism the same as normative individualism. That is, microfoundational explanations can be found at levels other than the individual level (Foss, 2011), in particular at the level of routines and (as this paper demonstrates) structure (Felin & Foss, 2009; Teece, 2007). Rather, the aim of microfoundational research in strategy is to reduce our explanations to a fundamental level, which might be the individual, team or group, but might also be a routine or structure. My aim in this paper is to help build towards a fundamental understanding of strategic change, rather than an understanding of how individual's act within organizations.

CHAPTER 3

THAR SHE BLOWS! MIDDLE MANAGERS AND THE MICROFOUNDATIONS OF THE ATTENTION BASED VIEW OF THE FIRM

At the beginning of his foundational paper on the ABV, Ocasio (1997: 187) quotes Simon (1947: 100-101) for the proposition that “[o]rganizations and institutions provide the general stimuli and attention-directors that channelize the behaviors of the members of the group.” Simon (1947) knew better than most of us, however, that organizations and institutions, at least directly, do no such thing. Routines established within organizations and, ultimately, the members of the organization (particularly the top managers) both direct attention and pay attention. This dual emphasis on organizational structure and individual cognition and behavior are at the core of the ABV (Ocasio, 1997: 188). What organizations do depends upon what top managers direct; what top managers direct depends on the issues upon which they focus; the issues upon which they focus depends upon their context and situation; and their context and situation depends on the firm’s structure, particularly rules, routines and networks.

Because of this link between top manager attention and strategic decision making, empirical and theoretical work on the ABV has tended to focus on a strong bi-directional connection between what the firm does well and where the attention of top managers is focused (Maula, Keil & Zahra, 2013; Ocasio, 1997, 2011; Kilduff, Elfenbein & Staw, 2010; Marcel, Barr & Duhaime, 2010; Cho & Hambrick, 2006). This lead in turn to the observation that firms tend to promote from their core functional areas and those CEOs continue to view the firm’s strategy through that functional lens (Michel & Hambrick,

1992; Burke & Steensma, 1998). In other words, at the organizational level, we can say that firms appear to act where they focus and focus where they act.

This has been a valuable insight into what we might consider firm-level attention (Ocasio, 2011). It has led researchers to recognize the importance of alert mechanisms that break the firm out of this attention loop and moves its focus to important new developments in their environment. As a result, researchers have identified a number of specific alert mechanisms that draw the attention of top managers to areas of strategic importance to the firm, including venture capital (Maula, et al., 2013), regulation (Cho & Hambrick, 2006), technological change (Kaplan, 2008), and large-scale societal changes, such as health care reform (Nigam & Ocasio, 2010). These alert mechanisms tend to be at an organizational level and tend to be exogenous to the firm, perhaps because the attention based view has tended to conflate TMT attention with organizational attention (Cho & Hambrick, 2006; Ocasio, 2011).

To those who approach the ABV from a strategy process orientation, however, these exogenous alert mechanisms are problematic; not because they do not exist – they undoubtedly do – but because firms cannot rely solely on their environment to alert them to environmental change. Environmental scanning is a key organizational process central to incremental strategic change (Teece, 2007). Environmental scanning is fundamental to the ongoing monitoring of the firm’s environment/strategy/structure coalignment process (Vankatraman, 1989). The “firm’s” attention cannot simply be fixed on the relatively small number of particular areas that top management (alone) can scan continuously; there is no guarantee that the next disruptive innovation will come from some expected source. Indeed, part of what makes an innovation disruptive is that it is not expected; it

comes from left field. To take one example, top managers in the recording industry were likely not following developments in digital file compression algorithms or tcp/ip protocols for wide area networks until shortly after people started sharing MP3s over the Internet, although likely some middle managers were aware of what was going on, regardless of whether they understood the implications. A strategy process that did not alert top management to this disruptive environmental change is a sub-optimal strategy process.

In other words, firms cannot assume that top managers can choose to monitor that slice of the macro-environment that will turn out to be relevant. Rather, firms need to incorporate a mechanism for directing the attention of decisions makers to areas in the firm's environment that have become (are becoming) relevant. Moreover, given the practical and theoretical limitations on TMT size (Azason & Sapienza, 1997) and all of the contending matters that the TMT must pay attention to, it seems unlikely that the TMT, alone, can scan the firm's environment. This is the domain of strategy process and, in particular, of strategic renewal, the idea that performance is positively associated with mechanisms that move strategically relevant information through the organization so that it can make small incremental evolutionary changes to its strategy over time, rather than react suddenly to unexpected discontinuous change (Dess, et al, 2003).

In this paper, I begin to describe this sort of mechanism: an alert system for focusing top management's attention on areas that are becoming relevant. This system is not exogenous to the firm, but rather is contained within the firm. Borrowing both from the middle management perspective (Floyd & Wooldridge, 2000) and from the related experiences of actual middle managers, I suggest that firms use middle managers to pay

attention to those areas outside the focus of the TMT and to alert top managers if anything happens within the purview of the middle manager that requires their attention (Ren & Guo, 2011; Floyd & Wooldridge, 1992).

Based on interviews with middle and top managers at a high tech company located in the Northeastern United States, I sketch out a mechanism for scanning the environment and alerting top managers to relevant change. This mechanism starts with individual middle managers whose structural position gives them a “view” of the external environment not focused on by top managers. Using the tools of “synthesizing” and “championing” (Floyd & Woodridge, 1992), these middle managers alert top managers of the need to shift their focus. Top managers can then decide whether to adjust the firm’s strategy.

In my conception of this mechanism, middle managers, based upon their structural position within the firm and their own cognition, are like look-outs on a whaling ship tasked with shouting out to alert the Captain when they spot a whale. Just as lookouts free the Captain from constantly scanning the horizon for whales, this mechanism allows the TMT to focus on the most promising or critical area, confident that any unseen change will soon be called to their attention.

Through this research, I aim to add texture and nuance to our understanding of the ways in which top management attention can be refocused through the actions of middle managers. In so doing, I hope to enrich two theoretical streams. The first, the ABV, does not thus far include a study of how organizational structure and internal communication allow top managers to focus on one or a few areas because, if something happens outside of their focus, their view will be drawn to it by lower level managers. At the same time, I

hope to enrich our understanding of the middle management perspective on strategy process, which suggests that middle managers are involved in the formation of organizational strategy (Wooldridge, Schmid & Floyd, 2007), but which has had little success in discovering the mechanisms by which this happens. Focusing on individual heterogeneity (Foss, 2011) and middle manager attention based effects (Ren & Guo, 2011), I begin to exhume the “cogs and wheels” of both middle manager strategic work and the attention based view (Elster, 1989:3).

In what follows, I briefly trace the argument for more microfoundational research into strategy process (Schmid, Floyd & Wooldridge, 2010). I also summarize the literatures on the attention based view and the middle management perspective. Finally, I recount my qualitative findings, identifying what might be key characteristics of the role middle managers play in making sure that no part of the organization’s environment – even those held by top managers as being a low priority – is ignored. I end with a discussion of the implications of my findings and suggestions for further research.

The Microfoundational Approach to Strategy Process

Although the attention based view of the firm is theoretically established at the organizational level, little empirical work has been done at the individual level (below the level of the TMT) tying individual cognition, structural position and behavior to where the “firm” focuses its attention. Microfoundational work seeks to explain firm-level phenomenon of interest “at the level of structure, behavior and laws of its component parts plus their relations” (Foss, 2011: 3). Before we can have a macro level causal explanation for a given phenomenon, we must understand the micro causes upon which that phenomenon is founded (Abell, Felin & Foss, 2008). We can seek to explain firm

level phenomena – indeed, explaining organizational performance is the fundamental purpose of strategic management (Abell, Felin & Foss, 2008) – but firm level phenomena cannot be explained wholly in terms of firm level phenomena (Foss, 2011).

Organizations are, reductively, the people within their boundaries and their routinized interactions (Abell, Felin & Foss, 2008). Thus, the explanation for strategic change can only be found in the structure of the organization, the behavior of managers and their psychological biases, plus their routinized interactions (Moran, 2005).

Bringing this reductionist approach to the attention based view, I adopt Abell, Felin & Foss's (2008: 492) idea that "strategic management should fundamentally be concerned about [*sic*] how intentional human action and interaction causally produce strategic phenomena." I am looking for a cause of organizational level strategic change using "cogs and wheels" (Elster, 1989: 3) located at the individual level of actions and interaction of individual middle managers (Abell, Felin & Foss, 2008; Foss, 2011).

Qualitative methods are well-suited to this type of research because I am focused on individuals and their subjective understanding of the firm's environment and because I am only starting to work towards generalizable theories of the individual foundations of firm attention. I should also note that I did not start this research looking for the mechanisms behind the ABV. Rather, only after my attention was called to these particular episodes through the iterative process of qualitative data analysis did I realize what I had seen.

Theoretical Background

The Attention Based View of the Firm and the Middle Management Perspective on Strategy Process

While CEOs and top level managers approve, legitimize and maintain strategic cohesion across the organization and operating managers actualize organizational capabilities (Floyd & Wooldridge, 1996; Wooldridge, Schmid & Floyd, 2008), middle managers, because of their position in the organizational structure mediating between top and functional managers, make the incremental day-to-day adjustments that allow adaptation to a changing environment (Burgelman, 1994; Floyd & Wooldridge, 1996). That is, middle managers as a group work both to integrate induced organizational strategy into the overall operations of the firm and to nurture new strategic approaches that diverge from existing strategy (Floyd & Wooldridge, 1996). If the domain of top managers is organizational strategy and the domain of operating managers is functional strategy, then the domain of middle managers is aligning functional strategy with organizational strategy (Wooldridge, Schmid & Floyd, 2008). We can, in other words, think of middle managers from an ABV perspective as potential extensions of the TMTs attention down through the firm. A middle manager who seeks advancement – which is, to be sure, not all middle managers – might seek to attract top managerial attention, which is a scarce resource and thus must be “paid for”, by attempting to demonstrate his or her strategic ability.

As I have noted, little research into the ABV has paid attention to the organization below the TMT. Rather, research into the ABV has been at the organizational level, focusing either on the TMT or on exogenous alert mechanisms, or both (Cho &

Hambrick, 2006). This focus on organizational level attention, however, is not inherent in the ABV. While recognizing that the TMT is critical to the firm's attention regulation, Ocasio (1997: 197, 200) expressly observed that middle managers could be both players (individuals and groups who "affect the firm's attention regulation through the specific skills, beliefs, and values they bring to the firm") and decision makers (participants in the "enactment of the environment and the social construction of organizational moves"). The middle managers, for example, who allocated Intel's chip making resources across its product lines were, in this sense, decision makers (Burgelman, 1994).

What is it, then, that middle managers do that is strategically relevant and how do these activities alert top managers to the need for strategic focus? Floyd & Wooldridge (1992) identified four strategic activities of middle managers: they implement functional strategies that cohere with organizational strategies; they facilitate change in functional strategies as strategic needs change; they synthesize current developments with organizational strategy in their reports to top managers; and they champion new organizational strategies to top managers as they see the need for them. It is the latter two activities – synthesizing and championing – that potentially alert top managers to the need for change. Synthesizing can be thought of as reporting that current strategy requires some incremental move; championing can be thought of as reporting that current opportunities or threats (external or internal) require a new strategy.

Ren & Guo (2011), working expressly to draw from both the ABV and the middle management perspective, theorize that firm structure, among other things, channels middle management attention to strategic opportunities that align with the firm's existing strategic orientation. They argue, in effect, that synthesis is the only middle management

alerting mechanism. They use this insight to suggest propositions about which middle managers, given their structural position within the firm, will see particular opportunities. They argue that due to bounded rationality, “middle managers cannot pay attention to *all* available initiatives; they notice some initiatives while ignoring others” (Ren & Guo, 2011: 5). This is, more or less, my point about top managers although, since there are always fewer top managers than middle managers, the danger of top managers missing some relevant development is often greater. Ren & Guo (2011) speculate that middle managers are more likely to notice available initiatives consistent with the firm’s strategic orientation, those inconsistent with the firm’s orientation are more likely to be overlooked.

Based upon my empirical research, I take a somewhat broader view than Ren & Guo’s (2011) conceptual approach. I suggest that firms have multiple mechanisms regulating attention. In my research site, which I will refer to as the “Division”, the role of the formal strategy review – pitched as a way for middle managers to bring new strategic initiatives to top management – played very much the role envisioned by Ren & Guo (2011). This process was used to channel middle manager attention into the firm’s existing strategy. But the firm also has other mechanisms by which middle managers could bring to top managers strategic opportunities outside of the firm’s existing strategy. It is on these latter mechanisms that I focus.

Specifically, I focus on three episodes of middle managers embedded within the Division calling attention to changes in the firm’s environment. These changes were happening in areas not historically important to the firm (for example, changes in the consumer market where the firm has previously sold only to businesses). One of these

episodes led to major strategic change (Greiner & Bambri, 1989: 68). In another, the firm changed incrementally, deciding to invest resources to explore an opportunity brought to it by a middle manager. In the third, the middle managers failed to convince the TMT to change. Using these episodes, I explore qualitatively the actions of middle managers who shift the focus of top managers. In so doing, I explore the microfoundations of the ABV by looking at both individuals and their structural position.

Research Method And Context

Research Background

Qualitative methods are particularly well-suited to microfoundations research, particularly where, as here, the research is exploratory and designed to help build theory (Eisenhardt, 1989; van Dijk, et al, 2011). Micro approaches necessarily focus on individual heterogeneity in situation and disposition in order to explain the causes of macro level phenomenon (Abel, Felin & Foss, 2008; Schmid, Floyd & Wooldridge, 2010). Qualitative research methods similarly focus on individual experience and can be used to understand both the implications of individual heterogeneity and how managers embedded with the organization understand their assigned role and how it meshes with their actions (Rouleau & Balogun, 2011). Qualitative methods also bring to the fore issues of individual interpretation and sensemaking, which are critical to our understanding of how particular middle managers recognize and capitalize on divergent strategic opportunities (Eisenhardt, 1989; van Dijk, et al, 2011).

I conducted semi-structured interviews during the summer and fall of 2009 in a recently acquired division of a \$17 billion high-technology firm headquartered in the Northeast. The data presented here draw from interviews with four senior (C-level

managers reporting directly to the Division's CEO) and eight middle level managers (those managers with access to top managers and knowledge of operations (Schmid, Floyd & Wooldridge, 2010)). The Division assigned a middle manager to me as a liaison; he would arrange interviews for me with other managers at the Division, explaining that the research was being conducted with the knowledge and support of top management. My liaison was also a useful informant in putting roles in context within the structure of the Division. Because of the way in which interviews were arranged, and because they took place at the Division headquarters during working hours, informants generally set aside one hour for our meeting. Although this limited the time for any one interview, multiple interviews were possible and conducted with two informants.

Interviews were digitally recorded (I have approximately 10 ½ hours of recorded interviews) and then I transcribed them into document files. The digital interviews and the transcripts were entered into ATLAS.ti software, and coded. I coded the interviews by subject matter first and used those codes to organize my research material around topics. After approximately half the interviews were completed, I suspended active interviewing in order to pursue a period of iterative theory development based upon the then-completed interviews and archival and public information about the Division (Eisenhardt, 1989). At this point, I recoded moving from topics to theoretical constructs. Interviewing then recommenced. After all of the interviews were completed, I recoded once more. In this third coding, I was able to arrange my research material around the theory and model presented here.

Informants were drawn from the Division's four functional departments (Products, Marketing, Technology and Operations). I interviewed each of the heads of

the four functional departments, with the balance of the interviews comprised of two managers from each department. The middle managers I interviewed spanned the Division's managerial hierarchy, from "Directors" who directly supervise operating managers to "Vice Presidents" who report directly to top managers. All told, at the time of my research there were approximately 200 middle managers at different locations around the world. Following completion and transcription of all interviews, the interview data was organized sequentially to produce a timeline of the key events in the evolution of the Division's strategy. Examining the data in this way allowed us to identify incidences of middle management lead strategic change and associated managerial activities.

I did not undertake this research seeking to prove (or even develop) theories about the attention-based view. Instead, I conceived of this research – and, indeed, still conceive of it – as part of a multi-site, multi-organizational, international study of the antecedents of middle management strategic involvement in evolutionary strategy renewal. My initial goal, which turned out to be somewhat naïve, was to identify entrepreneurial middle managers, interview them to discover what made them entrepreneurial and then develop generalizable and testable theory about the antecedents of middle-manager involvement in corporate entrepreneurship. To that end, I asked each of my informants to identify episodes of corporate entrepreneurship within the organization and to identify middle managers who were reputed to be entrepreneurial. What I found was neither entrepreneurs nor entrepreneurship, but a system in which middle managers embedded in an organization worked episodically to change organizational strategy.

Site Background.

The Division was founded as an independent company to exploit patented data security technology discovered by its three academic founders. At the time of founding, the patent belonged to the University that employed the founders. Shortly after the founding, however, the University voluntarily gave up the patent and it became public domain. Nonetheless, the Division continued to be an industry leader, maintaining its place as the foremost developer of technologies based on the former patent. Partly because of its history, and partly because of its sponsorship of an annual industry conference, the Division sees itself and is seen by analysts as influential in setting the industry agenda.

The Division was acquired by its current parent, a leader in a closely related hardware industry, in 2006. After the acquisition, the Division's incumbent management largely remained in place, including the CEO. Over time, however, the parent has moved its own managers into key positions within the Division. At the time of my research, three of the four heads of the Division's functional departments came from the parent. The Division's last CEO remained in place, and site has largely been given autonomy to form its own strategy (indeed, some of our informants, including carry-over managers, complained that the Division's strategy was not sufficiently coordinated with the parent to realize all possible gains from synergy). One of my informants, a senior middle manager in Marketing two hierarchical levels below the CEO, explained that the Division's brand and industry leadership were a large part of its value to the parent in the acquisition, and it would thus have been irresponsible not to maintain its separate identity. Managers have, however, been told that success of the acquisition depended

upon quadrupling annual sales to approximately \$1 billion by 2011, a goal the Division did not achieve. All of my informants mentioned this goal and stressed its importance, some referring to it as the Division's "strategy." Although the Division did not achieve this goal – missing relatively narrowly – it continued to be responsible for an outsized portion of its parents profits, based upon its relative sales. In other words, its profit margin has traditionally been high.

My research is focused on the Division's strategy from 2005, just before the acquisition, to 2009. This was been a period of change for the Division, including selling itself to its new parent. During this period, the Division made or considered a number of major strategic changes, three of which are reported on here. Two of these changes were strongly opposed by top managers; one failed and one was adopted. The third was developed by a coalition of middle managers acting under cover of very general instructions from top management, but careful to stay outside of the Division's formal strategy review process. Throughout my interviews, the purpose and effectiveness of the formal strategy review was a major area of controversy. As an academic observer, it appeared to me that middle managers saw the formal strategy review as a chance to champion divergent strategic change and judged it, overall, a failure while top management saw it as a means of enforcing strategic conformity and judged it a success. At least two of my top management informants were aware of this dichotomy.

Alerting And The Division's Formal Strategy Review

The annual formal strategy review is intended to settle the Division's "strategy" for a rolling period of three years. It thus seems like a good candidate for an internal alerting mechanism and, indeed, when I began my research at the Division I focused on

the formal strategy process as the most likely source of incremental strategic change and strategic renewal (Dess, et al, 2003). This would be consistent with Ren & Guo's (2011) theorizing: middle managers alert top managers to opportunities consistent with the firm's formal strategy. Practice turns out to be somewhat more complicated.

The issues with the formal strategy process, as presented by my informants, are multifold. Both middle and top managers consider the formal strategy review flawed, with one C-level manager claiming that strategy process at "successful companies are really designed to kill new ideas." Communication of the outcomes of the strategy review is purposely limited. Middle and operating managers are frustrated because they contribute to the process, but do not know how decisions are arrived at. If their suggestions are not adopted, they feel that their work was wasted. Top managers suggest that time spent thinking about strategy is not wasted, but top management is interested in incremental change.

Further, as noted above, all of the managers I spoke with are focused on the goal of getting the Division to \$1 billion in annual revenue (a goal that the Division has not yet attained as of 2013). At the time of the acquisition, this goal was, implicitly, a demand that the Division grow at approximately 20% per year. A C-level executive in operations, who had spent much of his career at the parent before coming to the Division, suggested that the goal was more aspirational than fixed ("we are challenging ourselves. Will we get there in three years, will we get there in four years, nobody knows yet. But if you don't set it out there and having something that That leads into the entrepreneurial spirit, the innovation)", but that senior management was purposely not telling this to more junior managers. This is characteristic of the Division, which

multiple informants (including two C-level managers) told us chooses not to communicate specifics of long-term strategy to middle and operating managers.

One thing the focus on growth has done is focus the Division on growth through acquisition, rather than organically. As one informant, “Alice” – a middle manager with a strong reputation at the Division as an “entrepreneur” – told me, entrepreneurship in the Division is through acquisition. In part, this is because money spent on truly innovative new products will likely only make small differences to revenue whereas acquisitions can make a major impact. As a top manager responsible for developing new technology explained, it makes no sense to develop disruptive technology in-house; a new product will be too small to matter to a large company and the money would be more productively spent winning marginal sales of existing products. The better route to new disruptive products is to wait for them to survive their entrepreneurial phase independently and then buy them: “the environment inside the building isn’t as harsh as outside the building, so you’re likely to have worse ideas not getting winnowed.”

At the same time, “Bob”, a middle manager who prides himself on having a strategic mindset told me that the Division has a “veto culture” where the support of many people in the strategy process is necessary to move forward with an acquisition but only one “no” can kill it. Another senior middle manager (“Carl”) noted that the Division did value innovation and welcomed new ideas, “but at the lower levels, employees don’t know where to go with ideas [that is, who to present new ideas to]. Ideas are only as good as the group thinks they are. Anyone can stop an idea with one objection.” Bob, who partially explains his inability to “sell” four different strategic changes “because I’m tapping into the wrong social network” also notes that an acquisition has to go through “a

dozen committees, the membership of which is composed of 10 people ... each of which has a chance to say no and stop something.”

Alice, the entrepreneurial middle manager, is scathing about the formal process: “My honest opinion? It’s a bunch of bull shit... It’s ... it’s ... I mean, I’ve worked on the strategy team every year, so has everybody else, and they get all psyched ... because there’s cool things you can do and then the executive management never does anything with it. And then, you know somebody in executive management have a really nice meeting with somebody from some other ... company and goes, ‘we should acquire them. They’re awesome.’ And that’s how it goes.” Alice makes a point of avoiding the formal strategy review; Bob has four times tried to get approval for an acquisition through the formal process and has four times been denied.

In sum, many top and middle managers consider the formal review process to be primarily a budgeting exercise, in which the budget for the next year is locked in, and preliminary budgets for the two following years are developed. Most of the middle managers I spoke with were either frustrated with the formal strategy review, or were unaware of it. Top managers saw the process as a way to make sure that new strategies aligned with existing strategy; the purpose of the process in their view was to enforce strategic orthodoxy. Overall, both top and middle managers were cynical about the process; one senior middle manager told us, after noting that the process happens in the summer, that the joke at the Division is, “it’s July; time to innovate.” None of the three episodes of middle manager strategic involvement resulted from the Division’s formal strategy development process.

The formal strategy review thus operates, in part, as an alerting mechanism. Middle managers and other people who are not members of the top management team have a chance to present strategic opportunities that align with the Division's formal strategy. This is very much a resource allocation exercise (which might help explain the perception that it is a budgeting rather than strategy process). Top management picks the ideas that seem to offer the best returns in light of current strategy. It is important to note that the resources being allocated include top management attention. A C-level operations manager told me that "I've heard lots of feedback, where people say, 'oh you made me do all this work.' Yeah, but that was the intent, think about it.... It doesn't mean your idea wasn't a good idea, it's just not something that we're going to focus on right now." The formal strategy review is an alerting mechanism, but a limited one. Top managers want to see what opportunities middle managers can bring to them, but in practice choose to focus on those that align with current strategy. It is not that middle managers do not process opportunities outside of formal strategy; they are asked to "think outside the box." But the purpose is to find those opportunities that are worth top management attention.

Three Episodes Of Middle Manager Alerting

The First Episode: Betting Your Job.

The first episode of middle manager alerting led to the most dramatic change in the Division's strategy. It is not too much to say that, as a result of this episode, the Division underwent a Kuhnian (1962) paradigm shift in which some senior managers could no longer function. Fittingly, the episode ends with a high stakes boardroom showdown, in which two sides square off to control the future of the Division.

From its founding, the Division's primary business was to sell specialized computer security hardware into a business environment. Its mission, as legitimized by top management and assimilated by middle management, had been to provide the best possible product. Many of our informants across the Division discussed its commitment to making the best possible product, and some were upset at the perceived loss of that commitment as a result of this episode. This commitment to be the best was a matter of pride at the Division that can perhaps be traced to its academic roots. Once strategy changed, the Division saw itself primarily as a software supplier with a legacy hardware business and supplied products "good enough" to satisfy its customers' needs.

The origins of the change came from top management, who wanted to exploit its existing hardware by selling into consumer markets without changing the fundamental product. This assignment was handed off to lower level managers, on the assumption that, given the high quality of the product, growth in the consumer market would be a simple matter. This assumption was characterized, after the fact, as "ludicrous" or "absurd" by three informants, an indication of how fundamentally the Division's self-image had shifted once top managers shifted their focus to the consumer sphere.

The middle manager who alerted top managers to the crisis developing in the consumer market ("Dan") had started his career at the Division in Marketing. Dan was the second marketing person hired when the Division's total revenue was approximately \$50 million. He had an MBA degree and previous experience at high-tech start-ups. When the Division started to move into the consumer sphere he was tasked with finding partners to help in reconfiguring the hardware for consumers.

Dan was soon involved in three vertical boundary crossing conversations; that is, conversations across the organization's boundaries. First, in negotiating with potential joint venture partners, he discovered that the margins available to the Division in moving into the consumer space would be very low, with much of the value appropriated by the joint venture partner. Second, while talking to a salesperson, he found that the Division was losing most orders it sought to place because of customer resistance; it could not sell the idea of using hardware in the consumer space. Third, he found that a number of relatively small start-ups were having some success with software solutions that, while competing with the Division's products, were (as the Division saw it) of unacceptable quality. At the same time, a variety of regulatory changes had greatly increased the size of the consumer market. To Dan, it was obvious that the Division should acquire a competing software company and fundamentally change its product offering in the consumer space.

This solution, however, was incompatible with top management's focus on providing the best possible solution. Specialized hardware allowed the Division to supply its business customers with a very high quality solution; much higher than his conversations were showing to be necessary for the consumer space. A software solution would necessarily mean a lower quality product, but conversations with customers suggested that the higher quality was not valued by consumers and that the convenience of a software solution, which could also be implemented online, was much more valuable. The dominant coalition, which saw the Division's mission as "best possible" quality, was unwilling to countenance selling a product that was less than the best possible solution.

There were, however, two exceptions to this opposition. Once alerted, the CEO, who was relatively new and came from a financial rather than technical background, favored the move to software products, as did an executive reporting directly to the CEO brought in to manage the move into the consumer space. Despite this support, top managers in the dominant coalition insisted on a showdown in front of the board of directors. The night before the board meeting, the CEO said that they had better want the acquisition, because they were betting their jobs. Before the presentation, his boss told him that this would either be the best day in his career or the worst. “You’re on your own. You’ll either make it and take over my job, or you’ll be gone shortly.” The board sided with the CEO and the acquisitions moved forward; shortly after, a C-level executive and several senior middle managers left the company. Even years afterwards, the fight over these acquisitions were still echoing in the Division; without rehearsing the history, one junior middle manager (four levels below the CEO and supervising operating managers) complained that the Division used to be committed to the best possible product, but now people “were more revenue focused than tech focused.”

The Second Episode: Skunk Works

The second episode I studied can be considered a failure, as the product in question was never marketed, but nonetheless it did refocus the attention of senior managers. This is an episode about persistence, about working around the system, and about being a high-maintenance employee. It is also an episode that shows the difficulties of refocusing when top managers are focused on rapid revenue growth.

The origins of this episode are located outside the organization. Three engineers employed by the Division including Alice were all enrolled in a part-time MBA class.

They were asked as a class exercise to develop a new product and present a business case for that product. Working together, the three engineers leveraged the Division's hardware product into an innovative new product aimed, as it happens, at the consumer space. (Episode two takes place several years after episode one.) They then sought support within the Division to actually develop this project. In this project, the managers were trying to leverage the Division's internal resources to offer a new product into its existing markets.

Given Alice's skepticism about the formal process, it is not surprising that she bypassed it. Instead, she "pestered" senior management to let her work on developing the product. Ultimately, she was told by a C-level manager that, if she could demonstrate customer interest, she would be allowed to develop the product. The C-level manager – also one of our informants – later admitted that he had not expected her to succeed.

Indeed, working through the Division's sales and marketing network, however, she was not able to make any progress. Other managers and outside salespeople were not eager to help her without knowing that the project had a sponsor in top management. Finally, she used a personal network outside the organization (through an arts community she was involved in) to arrange a meeting with a senior manager at a potential customer. When she returned from this meeting, she met with the C-level manager to discuss the customer's expression of interest. When the CEO walked past the conference room, the top manager invited him in, saying "you've got to hear this." The CEO immediately authorized her to work on project development full time. She and her team continued to meet with the CEO quarterly and met all of the goals they were given, including a goal to find an external customer willing to pay for the product development in return for

exclusive rights to the product for a limited time, another goal that top managers assumed she would not be able to meet.

Nonetheless, the project was canceled. According to our C-level informants, the potential returns to developing this product were large relative to the money spent, but not certain and not large compared to the Division's existing revenue or its goal of aggressive growth. In effect, the team's unexpected success in finding outside development money had, ironically, the effect of dooming the product; the members – who as one top manager said, were able to sell a piece of paper for hundreds of thousands of dollars – were too valuable to waste on speculative product development. Top management decided that managers that skilled were better used on bigger projects.

Bob, who was not directly involved in the project, used it as an example of why the only way to innovate in the Division is by “skunk works”; that is, by keeping a project in development away from top managers. This project had become too visible. Nevertheless, Bob supported the decision to close down the project. He argued that no internal development process can be as effective in winnowing innovation as the market; for this reason it is better to buy new product innovation by acquiring start-ups who have had some success. This raises an interesting aspect of middle manager alerting: middle managers are vying for top management attention for their own good as well as for the good of the company. Advancement can come through attracting attention (of course, only if the attention is the right type of attention). In this project, this dual purpose – alerting as a means of influencing organizational strategy and alerting as means of advancement – worked at cross-purposes. Alice wanted to “sell” top management a new product; what she ended up selling was the value of Alice. Her cross-boundary

connections, which allowed her to see the opportunity for a new product, also resulted in her personal advancement even though her project was doomed.

The Third Episode: Timing Is Everything

The third episode, also prompted from outside the Division, is perhaps most notable for the reluctance of the participants to take credit for the idea. This reluctance is particularly interesting given the dual purposes of middle manager alerting discussed above: both to influence strategy and also for personal advancement. Five of the people I interviewed, one top manager and four middle managers (all of whom but one reported directly to C-level managers), were directly involved in the episode. Each said that one of the others was primarily responsible, and each denied being themselves responsible. It is clear, however, that wherever the idea came from, Alice was the main driver.

The project was suggested by a third-party, a company that dominates a critical computer hardware market (Burgelman, 1994). This company suggested that there could be synergies in selling a product combining aspects of its own products, the Division's products, and the parent's products. This project was given to Alice, who had received a promotion as a result of episode two. She solicited ideas from across the company for new products, which were then winnowed by the outside partner. She purposely did not use the annual strategy review.

According to Alice, much of middle management strategic leadership is execution. She is not, she says, an idea person. Her skill is execution; she is able to take a creative idea and manage creative people while finding solutions to obstacles. Her talent, she says, is that when she runs into a wall, she finds a way around it. She also has personal experience in start-ups, working from a young age in two high-tech companies

founded by a family member. Her expectation is that she will ultimately “flee” the Division for a start-up, although on the other hand the Division has kept her this long by giving her interesting projects working with “brilliant” people. She notes that she hated working at the Division when she started; she hated the “gray cubicles” and had never worked in a large company before. Her solution was to remake the department in which she was working – as an engineer, not a manager – in the image of a start-up.

Much of what she describes as execution is putting together the right team. This includes her boss, who is “brilliant” but isolated from the rest of the Division. It also includes Carl, who she describes as the most political person she knows, in the sense of being sensitive to site politics. She brought him onto the project to “deal with legal” in getting clearance to sell software that had not gone through the formal development process. When she was unable to get cooperation from the product development teams, she went to a professional services department typically charged with writing software for particular customer projects, bypassing the formal hierarchy. When the three companies involved were unable to negotiate a timely nondisclosure agreement, she convinced technology managers in the other two organizations to proceed with an oral agreement before the NDA was fully negotiated and signed.

At the same time, because of her reputation as an entrepreneur, she was during this period contacted by the CEO’s office and asked about interesting new products to be highlighted in a scheduled major speech by the CEO. In answer (quite literally alerting top management to a change in the firm’s environment), she lobbied to make this project the subject even though it was “vaporware” (that is, it didn’t yet exist). This publicly committed the Division to the product. Ultimately, the Division released more publicity

statements about this project than any other single project in its history. Again, Alice's contacts across the Division's hierarchical boundaries were key.

This project resulted in a new product that completely bypassed the "product killing" formal development process. When I asked what her reward was for pushing execution of this project, she was unable to give an answer that she found convincing. Ultimately, she said that it allowed her to help her boss and show how brilliant he was. She denied that it was money and resisted the idea that the process had been "fun." She suggested that personal satisfaction had been part of the potential reward in episode two, but not in episode three because the project was not her idea.

Theory Development: Middle Managers And The Attention Based View Of The Firm

Trying to draw lessons from my research, I begin to see how middle managers can be key to the attention based view of the firm. The fundamental insight behind this view is Simon's (1997) treatment of managerial attention as a scarce resource. This scarcity is ameliorated to some extent by having a top management team able to bring to bear more attention than any single executive has to spare. But the TMT is, by nature, of limited size and increasing size can reduce efficiency (Amason & Sapienza, 1997). The firm can rely on exogenous alert mechanisms, but by their very nature those mechanisms are problematic in that they will not "alert" top managers until they present a problem that must be addressed.

I suggest, instead, an alert mechanism endogenous to the firm. Top managers focus on those areas, both internal and external, that are of greatest strategic importance to the firm (Ocasio, 1997). But they can do this only because middle managers are

focusing on those areas of lesser strategic importance. Middle managers are by definition located between the firm's functional operations and top management. If there is a conflict between functional strategy and induced or formal strategy, that disconnect is likely to be noticed first by middle managers, who are responsible for both integrating functional strategy into organizational strategy and synthesizing information from various sources and reporting to top managers on strategic developments (Floyd & Wooldridge, 2000; Mantere, 2008). In short, middle managers are the firm's first line of defense against top managers ignoring the importance of shifting their strategic focus (Burgelman, 1994). Through this research, I am working towards a theory of how middle managers go about alerting top managers to the need to, as it were, "look over here."

Middle managers are, of course, embedded within firms and firms, like any institutions, have their own routines and cognitive schema (Teece, 2007; Moussavi & Evans, 1993). It is therefore worth considering the Division as a context. Figure 3-1 is a word cloud in which the relative size of a word shows its frequency within our interviews (after removing common English words and proper nouns). While not to be taken too literally, a word cloud is a useful generative tool in considering the theoretical implications of qualitative data (McNaught & Lam, 2010). Indeed, the relative importance of products, people and strategy do allow insights into the Division's strategy process when read in light of our informants' opinions. The idea that the Division is product focused comes through in my research: one top manager complained that each product team would compete to convince the sales force that its product should be the focus of their efforts (would "vie for attention from sales, without paying attention to [the Division's] overall priorities"). Another senior middle manager felt that the Division's

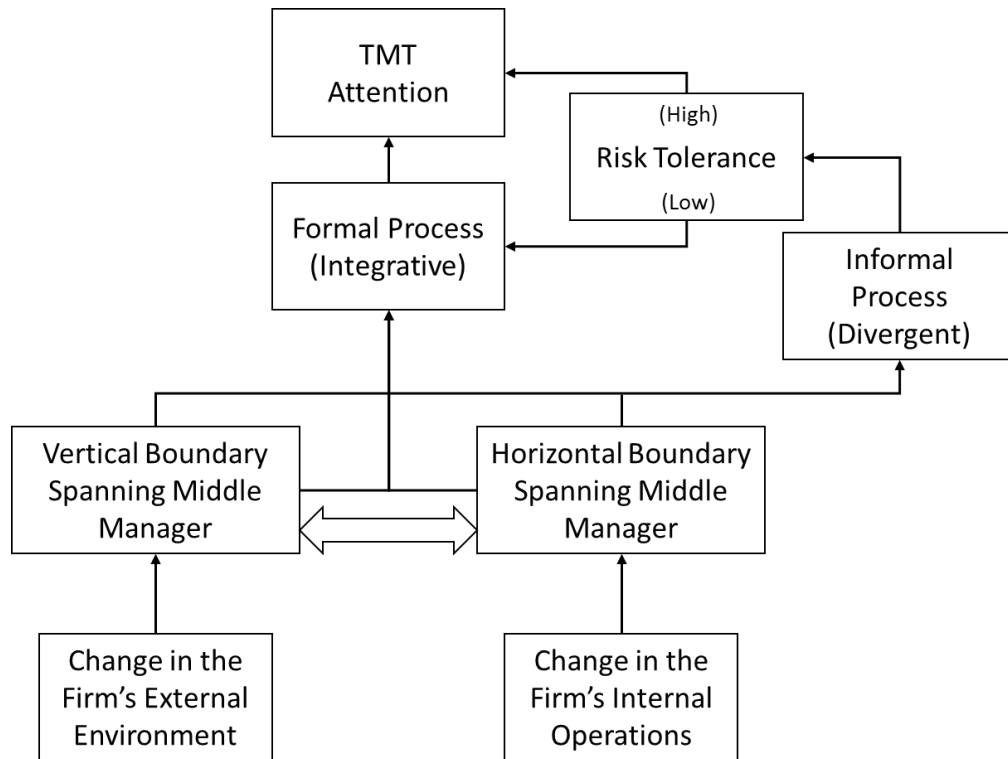
“product range preceded their current strategy ... and doesn’t necessarily dovetail neatly with their current strategy.” Everything follows from the product mix, with both strategy and people a secondary concern.

Figure 3-1: A Word Cloud in which the Size of a Word is Proportional to its Frequency in our Interviews.



What then can we say about alerting mechanisms at the Division in terms of individual behavior and cognition, as well as structural positioning? What do middle managers see, and what do they do about it? In what follows, I develop a process model of middle management alerting (see Figure 3-2). The process model begins with change in the firm’s external environment and internal operations because strategy begins with the need to fit the business into its environment (Venkatraman, 1989). Those top managers responsible for induced or formal strategy must pay attention to both internal and external developments, either of which can affect performance – or at least have in place routines and mechanisms to alert them if their focus should have to shift. I end with TMT attention, which – from my microfoundational/reductionist position – is what I understand “organizational attention” to be (Ocasio, 1997). This is what “alerting” is in my model; the proffering of information to top managers that diverts their attention.

Figure 3-2: A Process Model of Middle Management Alerting



The next step seems to be that strategically relevant change, either in internal operations or in the macro-environment, comes to the attention of a boundary spanning middle manager. This can come from operating managers or from outside the firm. This might also be considered alerting – how is middle managerial attention focused on change? Middle manager attention, however, is not organizational attention, and is thus outside my model here. There is, in any event, nothing particularly surprising about the importance of boundary spanning middle managers (Pappas & Wooldridge, 2007). Here, however, we can see the microfoundational mechanism at play: by spanning organizational boundaries, the middle manager is well-positioned to see emerging opportunities or threats away from the organization’s focus. We can also suggest, and my research supports this, that middle managers who cross organizational borders are

more likely to see environmental change while middle managers who cross hierarchical borders are more likely to see a change from internal operations. What perhaps has not been recognized in the literature is that middle managers are active “alerters” rather than passive receivers of information. That is, having seen a change in either the environment or in operations, they might then go looking, as both Alice and Dan did, for a matching opportunity on the other side (either an environmental opportunity for an internal change or an internal opportunity for an environmental change). In episode 1, Alice had a technology based on internal resources and went looking for an opportunity in the environment. Dan found a change in the environment and went looking for (ultimately, instigated) a matching internal change, the change from “best possible hardware” to “good enough software.”

Next, how does a middle manager actually get top management attention? Middle managers can seek to alert top managers through formal processes and the chain of command, or they can go outside the chain-of-command and avoid formal processes. In our three episodes, the middle managers went around the formal process, because of their frustration with the lack of feedback, the politics, and the high probability of failure. But the formal review – and formal processes generally – do have a role to play that is somewhat underplayed in our literature, which focuses more on informal networks (Floyd & Wooldridge, 1999; Pappas & Wooldridge, 2007). If we accept that both paths are available, why choose one over the other.

Floyd & Wooldridge’s (1992) typology of middle management strategic activity identifies both integrative (synthesis and implementation) and divergent (facilitating and championing) activities. Based on my research, I suggest that middle managers will tend

to bring integrative ideas to the attention of top managers formally and divergent ideas informally. In each of the three episodes described, it was important that the middle manager did not simply report to his or her supervisor, but directly contacted a member of the TMT. It is likely that formal reporting up the firm's hierarchy dampens the signal to top managers; signaling that it is not urgent that top managers immediately focus on this new area. Direct communication alerts them to the fact that the middle manager believes that the need to pay attention is urgent.

Finally, based on my research, I would note that there is a role here for risk tolerance. Going outside the formal process is risky. The middle managers who did so have broader life experience than other middle managers I spoke with. They had been involved in start-ups (Alice and Bob). They had greater work experience and education (Dan). They each criticized the Division's overall strategy and strategy process, including its lack of coherence and transparency. In the end, they each were willing to run the risk of failing, even when that risk included a threat to Dan's job.

Discussion And Conclusion

These three episodes are suggestive of possible microfoundational explanations of strategic innovation in large, complex organizations. Of course, because my research involves a relatively small number of episodes in a single site, I must be wary about generalizing. As one reader points out, this might actually be a theory of "Alice." Indeed, some of the institutional factors contributing to these episodes might well be atypical of organizations generally. In particular, the focus on growth, while important in most organizations, appears to have a particularly strong hold on managers at the Division. This, in turn, leads to the focus on "entrepreneurship by acquisition" and the

hostility, appearing to a greater or lesser extent in all three episodes, to spending resources on internal development of disruptive innovations. It should also be said that all of my informants agreed that the culture at the Division is very welcoming of middle managers and operating managers who make suggestions for innovation. No one suggested that there could be adverse career consequences even from suggesting the most disruptive ideas. Nevertheless, the perception across the organization is that most ideas from middle management go nowhere.

Other facets of these episodes, however, appear to be common across organizations. The importance of access to top management is a common theme in strategy research (Raes, et al, 2011), as is the focus on political skills for selling new ideas up the organizational hierarchy (Dutton & Ashford, 1993; Dutton, 1997). These episodes illustrate ideas important to the top management (Hambrick & Mason, 1984), middle management (Floyd & Wooldridge, 1992), and dominant coalition (Cyert & March, 1953) literatures. I therefore tentatively advance a number of ideas worth further explanation about strategic innovation and the microfoundations of middle management led strategic change.

Many middle managers, and certainly most of those I spoke with in the course of our research, work within the bounds of the organization. They connect top management with operations while ensuring diverse operations across the organization cohere with organizational strategy. Every day, those middle managers work to bring the logic of organizational strategy to operating strategy: they “coordinate dissimilar activities and support a coherent [strategic] direction” (Floyd & Wooldridge, 1992: 154). This is, I suggest, not an issue of individual heterogeneity. This is, instead, the formal role of the

middle manager mediating between the higher levels of the organization and the lower levels. Other middle managers, for example those involved in sales or purchasing, are necessarily embedded within boundary spanning personal networks; they are exposed to information about the industry and the environment. They know their own context very well but might not have an overall view of organizational strategy. This is certainly true within the Division, where little attention is paid to giving an overall picture of strategy to lower levels of the hierarchy. These managers, too, are unlikely to champion disruptive strategic innovations, and again personal heterogeneity will not have great explanatory power.

The exceptions are illustrated by the middle managers involved in these three episodes. They have access to cross-boundary networks both internally and externally. They are positioned within the organization to have both a view of the external environment and an overall understanding of organizational strategy. Finally, they are able to conceive of organizational strategy changing (Ren & Guo, 2011). In addition to their structural position, the middle managers upon whom I have focused here suggest a number of possible micro-explanations. They have experience outside of the Division, sometimes in start-ups, or in a different milieu (e.g., the arts), or both. They have at least some formal training in strategy and environmental scanning. They have executive experience, or at least exposure to executive work. Obviously, as noted, they have access to top managers, and not just access but often relationships of trust. They have some measure of independence from the organization. As a result, they have cognitive flexibility (Raes, et al, 2011).

Finally, they have the ability to work outside of the formal process. In this connection, the difference between Alice and Bob is interesting. These two middle managers have very similar low opinions of the formal strategy review. Neither thinks that the process works, if it is intended to find and promote new strategic opportunities. Alice, described by other informants as “entrepreneurial”, has gone around the process and found personal and professional success. Bob, on the other hand, who describes himself as “strategic”, has tried to work through the formal process and has failed four times, a situation he finds immensely frustrating. Nonetheless, he says that he will keep trying to work within the system. Alice expects that, eventually, she will “flee” to a start-up.

CHAPTER 4

THE MICROFOUNDATIONS OF MIDDLE MANAGER STRATEGIC INFLUENCE IN A HIGH TECH FIRM.

Middle managers are embedded within the structure of large organizations, mediating between organizational levels and units (Wooldridge, Schmid & Floyd, 2008; Balogun & Johnson, 2004). Given their role and position, individual middle managers tend to have very detailed knowledge of a relatively narrow operational area and within that area are better able than top managers (who, because they have the larger view, are likely to have a less detailed picture) to resolve the causal ambiguity linking the firm's resources and its performance (King & Zeithaml, 2001). Using this local knowledge, middle managers are charged with integrating local or functional strategy with organizational level strategy, facilitating new local strategies, synthesizing strategically relevant information for top managers, and championing new organizational strategies (Floyd & Wooldridge, 2000). If enacted strategy forms as a pattern in a stream of decisions (Mintzberg, 1978), it is through these four roles – integrating, facilitating, synthesizing and championing – that middle managers influence strategy. Unfortunately, we have no clear understanding of how middle managers use these four roles to influence strategy, or whether some middle managers are more likely to influence strategic change than others (Wooldridge, Schmid & Floyd, 1992).

In this paper, I present the results of empirical research into this question: what is middle manager strategic influence? Our understanding of these four roles and how middle managers use them to influence strategy has not advanced substantially since they were first identified by Wooldridge & Floyd (1992) (Wooldridge, Schmid & Floyd,

2008). And yet, although there has been quite a bit of research into how middle managers as a group affect strategy at the organizational level (e.g., Ahearn, Lam & Kraus, 2014) and a growing body of research into specific strategic episodes (Rouleau & Balogun, 2011), there has been relatively little research into how and why individual middle managers are able to influence the development of strategy in large organizations.

Some of what we do know about middle manager strategic influence has been the result of social network analysis of organizations from the middle management perspective. We know, for example, that middle managers with contacts across an organizational boundary are more strategically active than other middle managers (Pappas & Wooldridge, 2007). We know that middle manager strategic influence depends on their reputational and informational capital; that is, their trustworthiness and access to information as perceived by others (Ahearn, Lam & Kraus, 2014). We know that middle manager influence on strategy has an ambiguous (and possibly contingent) relationship with organizational performance, with some studies finding negative relationships and others finding some evidence of a positive relationship (Wooldridge, Schmid & Floyd, 2008). We know that organizational networks are proxies for information flow (Burt, 1992) and that middle managers are embedded within both formal and informal organizational networks (Soda & Zaheer, 2012).

We also know that the fundamental role of middle managers in large organizations is to convey strategically relevant information down (“here is our formal strategy”) and up (“here is how our formal strategy is working”) (Balogun & Johnson, 2004). It is this role as information processors that give middle managers their influence, for good or ill, over strategy. They must take organizational strategy, apply it skillfully to

their own responsibilities, and then recognize and report back how well that strategy is working.

Once an organization has left behind its initial entrepreneurial phase, strategy largely becomes a question of continued environmental fit (Venkatraman, 1989). Once the organization reaches a certain level of complexity such that internal and external monitoring has grown beyond the ability of one or a few individuals, strategy development becomes a process of formal and informal routines (Simon, 1997; Floyd & Wooldridge, 2000). This environment/strategy/structure coalignment process (Venkatraman, 1989) is at the root of some of the most important streams of strategy process research, including the top management team literature (Finkelstein, Hambrick & Cannella, 2008), the literature on corporate entrepreneurship, strategic renewal and incremental strategic change (Dess, et al, 2003), and the literature on strategic response to environmental jolts (Garcia-Sanchez, Mesquita & Vassolo, 2013). In all of these research streams, the middle management perspective has an important contribution to make in furthering our understanding of the mechanisms of strategy process (Floyd & Wooldridge, 2000).

In a large firm, middle managers connect top managers to operations, implementing aspects of the firm's strategic plan and reporting back on the results. Middle managers (e.g., purchasing agents, sales managers, marketers) also connect top managers to aspects of the external environment. If strategy largely consists of fitting internal operations to the demands of the external environment, then middle managers are a key link in this process. Not surprisingly, then, middle managers can impede the firm's performance (Guth & MacMillan, 1986), or improve upon it (Pappas & Wooldridge,

2007). Confirming this insight, Ahearn, Lam & Kraus (2014) found a curvilinear relationship between a middle manager's social capital and upward and downward influence and firm performance. In other words, middle managers affect firm performance.

There are still gaps, however, in our understanding of the iterative process by which middle managers implement, influence and then implement strategy (Wooldridge, Schmid & Floyd, 2008). What routines do middle managers use to influence strategy? What explains the contingencies by which some managers, but not others, exercise this influence? Much of our literature treats middle managers as homogenous beings, with one just as likely as another to influence the firm's strategy (Schmid, Floyd & Wooldridge, 2010). Other research, especially research concerned with *praxis*, focuses on specific episodes involving individual middle managers reacting to a particular problem or assignment (e.g., Balogun, et al., 2013; Kodama, 2005). Moreover, "middle manager" is a title that hides large differences in position, autonomy and influence. Does middle manager strategic influence depend on some personal characteristic of the manager, so that that individual will have influence wherever located in the firm? Or is it a function of position, so that any person so situated will influence strategy? Or is it some combination of these two possibilities? Another possibility, suggested by Hart (1992) but not picked up in the literature, is that middle manager strategic influence is a function of top management decisions; that some top managers want assertive, strategic middle managers where others prefer middle managers focused on implementation.

In this paper, I report the results of a study of 49 middle managers located at the headquarters of a high tech company in the Northeast. This study consists of survey

results into which middle managers at headquarters are able to influence strategy; the basis for that influence (knowledge of the external environment; knowledge of internal operations; political skill; and personal relationships); and the extent to which each respondent engages in each of the four Wooldridge & Floyd (1992) strategic activities. I also surveyed the respondents about their formal and informal networks throughout the organization. I asked about their formal ties (who they report to and who reports to them) and their informational (who provides you with information necessary to do your job?), advice (who do you go to for advice about performing your job?), and social (with whom do you socialize outside of work?) ego-networks. I use the results to help understand which middle managers (in terms of structural position) influence strategy and what information and activity they use.

Before continuing on, it is important to note that this social networks study is more an exercise in mathematical sociology, or a type of qualitative research, than it is generalizable hypothesis testing (Hanneman & Riddle, 2005). Because of management changes at the research site, I was not able to complete a whole-network analysis, nor did I randomly select middle managers to survey; instead, all middle managers at the headquarters were invited to participate. That is to say, I do not in this paper claim that the relations I've found are representative of any group beyond my sample: I have survey responses for 49 middle managers within a single firm (a response rate of approximately 35%) and their responses tell us about their network and experiences only (Heath, Fuller & Johnston, 2009). The upside of this is that we can come to a fairly complete understanding of the relationships and influence of these middle managers in regard to strategy. The downside is that the theory presented here is suggestive only; it

must be tested against a far larger and more varied sample (more managers from many more firms) before we can conclude that the associations we see here are seen generally. In the end, I am trying to understand why certain of these particular middle managers are influential, not hypothesize about middle managers generally (Tichy, Tushman & Fombrun, 1979).

Theoretical Background

In conception, this research is located within the social learning perspective on strategy process (Wooldridge, Schmid & Floyd, 2008; Burgelman, 1988; Mintzberg, 1978). The social learning perspective broadly treats learning as a social process emphasizing issues of knowing and issues of being; socialization and learning are inseparable as learning is understood as being socialization and vice versa (Brandi & Elkjaer, 2011). This is an understanding of learning and knowledge diffusion particularly well suited to organizational learning, as it focuses on the socialization processes by which information is distributed throughout an organization and integrated into the organization's routines (Granovetter, 1978; Polanyi, 1974). In particular, the social learning perspective suggests that enacted strategy is formed through a quasi-evolutionary process embedded in the interactions of managers and employees throughout the organization with their peers, with other levels of the organization, with suppliers and customers, and other aspects of the firm's environment (Burgelman, 1983; Lovas & Ghoshal, 2000; Mintzberg, 1978; van de Ven, 1992). Through this social learning process, organizational strategy changes incrementally over time through the accretion of small, successful strategic adaptations based upon socialization into the

organization and its environment (Burgelman, 1991; Eden, 1992; Floyd & Wooldridge, 1999).

If the firm's ability to develop and implement new strategy depends upon its people and their interrelationships, then strategic decisions by top managers benefit from and are shaped by the interpretative efforts of middle managers (Burgelman, 1988).

Enacted strategy can thus be viewed as a function of two interdependent inputs. The first is the knowledge, skill, experience and internal reputation of the firm's managers (Ahearn, Lam & Kraus, 2014). The second is their patterns of interaction. Together, these two characteristics imply that middle managers contribute to strategy by learning strategically relevant information and then transmitting that information to where it can be best used in such a way that it becomes part of the social structure of the organization (Cohen & Levinthal, 1990; Floyd & Wooldridge, 2000; Nonaka, 1994).

In short, without ignoring the key role played by top managers in formulating and legitimizing a strategic plan (understood here as decisions about resources and markets) (Hambrick & Mason, 1984; Porter, 1980), I proceed from the idea that the link between performance and intended strategy (what the organization plans to do) is mediated by what the organization actually does (Mintzberg, 1978), and that what the organization actually does depends, in part, on the individual characteristics and structural position of its middle managers. This is the middle management perspective on strategy process research: that middle managers influence the formation of organizational strategy by integrating, facilitating, synthesizing and championing strategy (Floyd & Wooldridge, 2000).

The middle management perspective has done much to broaden theory about strategy formation but has not coalesced into a coherent and cumulative research agenda, in the same way that TMT theory (Hambrick & Mason, 1994), in many ways an analogous perspective on strategy process, has (Wooldridge, Schmid & Floyd, 2008). It is, for example, unclear whether middle management involvement has a positive or negative effect on performance (Ahearn, Lam & Kraus, 2014). Moreover, middle management research has bifurcated into two streams that rarely engage one another. One stream looks at middle management strategic involvement as an organizational level phenomenon (e.g., Tippmann, Scott & Mangematin, 2013) and the other focuses on particular instances of middle management strategic behavior without typically drawing conclusions for organizational strategy or performance (e.g., Rouleau & Balogun, 2011).

As a result of these factors, middle management research has failed (unlike TMT research) to explore the implications of middle management heterogeneity (Wooldridge, Schmid & Floyd, 2008; Schmid, Floyd & Wooldridge, 2010) for organizational level outcomes. This limits our understanding of both the middle management perspective and the social learning perspective because for heterogeneity in individual cognition, behavior and structural position ought to make a difference in both strategy development and learning, but it is a difference we all but ignore. Moreover, although the literature on the middle management perspective does not touch on this issue, there is no reason to believe, *ab initio*, that each of the four strategic middle management activities identified by Floyd & Wooldridge (1992) has similar effects on organizational strategy. It could be for example that poor implementation reduces organizational performance (Guth & MacMillan, 1986) without much upside from excellent implementation, while

championing new strategies, though rarely successful, has the potential of greatly improving organizational strategy (Burgelman, 1994).

How, then, do we bring heterogeneity into our theory? Although ultimately, a coherent and cumulative middle management research agenda will want to tie middle management heterogeneity to organizational performance, in this paper I seek first to understand the relationship between individual heterogeneity and strategic influence. In the next section, I develop hypotheses about the antecedents to middle manager strategic influence. As noted, I expect that strategic influence is a combination of behavior and knowledge, and is also contingent upon structural position.

Hypothesis Development

Behaviors that lead to Strategic Influence

To begin, what is strategy and what is the role of middle management in generating strategy? In this research, I defined strategy as decisions about resources and markets; respondents were instructed that “strategy, for our purposes, can be thought of as decisions about what markets to enter, what products or services to offer and how to create those products or provide those services” (Appendix A). Middle managers are involved with strategy through implementing, facilitating, synthesizing and championing (Floyd & Wooldridge, 2000). Which of these activities, if any, are linked to middle manager strategic influence?

Given the role of top managers in formulating and legitimizing strategy (Wooldridge, Schmid & Floyd, 2007; Hambrick & Mason, 1984), it seems more likely that the upward directed roles (synthesizing and championing) are associated with strategic influence than the downward directed roles (Ahearn, Lam & Kraus, 2014).

Indeed, there is quite a bit of research indicating that championing, or issue selling (Dutton & Ashford, 1993; Rouleau & Balogun, 2011), is a key activity of influential middle managers. A championing middle manager works to shape induced strategy by influencing top management's strategic vision rather than by influencing the particulars of implementation (Wooldridge, Schmid & Floyd, 2008).

There has been less work on synthesizing than on championing, although to some extent the literature on issue selling overlaps with synthesizing (Wooldridge, Schmid & Floyd, 2008). Moreover, the growing literature on strategy-as-practice (Vaara & Whittington, 2012) includes work on the sensemaking activities of middle managers, which are similar to Floyd & Wooldridge's (2000) conception of synthesizing (Guette & Vandembampt, 2013; Balogun, 2006, 2007; Balogun & Johnson, 2004, 2005; Rouleau & Balogun, 2011). Sensemaking by lower echelon managers involves interpreting strategy change in light of "their existing context of action, ways of thinking, and interactions with others." (Balogun & Johnson, 2005, 1574). Less remarked upon is that synthesizing allows middle managers to "sell" incremental strategic adjustments to top managers by locating them within existing induced strategy. In other words, a synthesizing middle manager influences strategy by convincing top managers that a new incremental change is, in truth, consistent with existing strategy.

Mantere (2008), having conducted 262 interviews of middle managers to investigate the effect of middle manager role expectations on their strategic activities, found synthesizing was very common, and led to feelings of continuity and progress. Mantere (2008: 307) concludes that synthesizing positions middle managers "as 'uncertainty absorbers', resting their reputation on the robustness of their interpretations

of the environment.” Championing, on the other hand, allow middle managers to feel a greater degree of control, so long as championing does not become a free-for-all, where top managers fail to sufficiently referee middle managers (Bourgeois & Brodwin, 1984). My first hypotheses, therefore, are that middle managers will be more influential to the extent that they work up rather than down.

Hypothesis 1a: Middle managers are more likely to influence organizational strategy to the extent that they engage in championing behavior rather than implementing or facilitating.

Hypothesis 1b: Middle managers are more likely to influence organizational strategy to the extent that they engage in synthesizing behavior rather than implementing or facilitating.

Knowledge that leads to Strategic Influence

In Hypotheses 1a and 1b, I look at the behaviors of influential middle managers. But as I have shown, social learning is a combination of knowledge and being; having looked at behaviors, we must now ask what knowledge leads middle managers to be influential. If we accept the idea that strategy is largely concerned with the coalignment of internal operations with the external environment (Venkatraman, 1989, 1990), then it would seem that middle manager strategic influence would depend upon knowledge of operations or of the environment. That is, a middle manager must have some contribution to make to strategy before he or she can influence strategy. Thus I hypothesize that influential middle managers have knowledge of either internal operations or the external environment. Of course, there is the possibility that strategic

influence is not based on knowledge, but on personal relationships or political skill. I must control for this possibility.

Hypothesis 2a: Middle managers are more likely to influence organizational strategy to the extent that they have greater knowledge of internal operations.

Hypothesis 2b: Middle managers are more likely to influence organizational strategy to the extent that they have greater knowledge of the external environment.

Ego Network Characteristics that lead to Strategic Influence

Embedded within their organizations, middle managers are part of a number of formal and informal networks (Ahearn, Lam & Kause, 2014). They have a formal network of supervisors and subordinates. They have colleagues who give them information they need to do their job (Floyd & Wooldridge, 1997). They have colleagues to whom they turn for advice on their jobs and careers (Bono & Anderson, 2005; Krackhardt, 1992). These networks, too, obviously have a role to play in allowing middle managers to exercise strategic influence.

If, for example, strategic influence depends upon knowledge about the firm and its environment, then we might expect the middle manager's informational network to be key. A middle manager with strategic influence might well be a middle manager with unique access to strategically relevant information. It is generally accepted that managers who can communicate across what would otherwise be a structural hole in the network (that is, managers who control the path through which information must travel) will have greater influence than those managers who do not benefit from structural holes

(Kleinbaum & Stuart, 2013; Shi, Markoczy & Dess, 2009). These brokers can use their access to a variety of sources of information as the basis for strategic influence.

Hypothesis 3: Middle managers are more likely to be influential to the extent that they have brokerage opportunities.

On the other hand, influencing strategy means influencing other people; both middle and top managers will have to accept the need for strategic change. We might expect, therefore, that a middle manager's strategic influence also depends upon trust; trustworthy middle managers are more likely to exercise strategic influence because other managers will more readily accept their judgment (Mantere, 2008; Floyd & Wooldridge, 2000). In this sense, brokerage is not simply control over information that can be used or not used to the benefit of the broker. Rather, brokerage is better thought of as the opportunity for a middle manager trusted by two otherwise separate groups of managers to communicate information from one to the other for the good of the organization. An influential middle manager must be trusted to act as an honest broker, one who will not act opportunistically to profit personally from information.

Hypothesis 4: Middle managers are more likely to be influential to the extent that they are honest brokers.

Finally, to what extent do influential middle managers talk to one another? That is, what is the role of homophily? Homophily, the seeking out of those similar to oneself, has received quite a bit of attention in social network analysis (e.g., Smith, McPherson & Smith-Lovin, 2014). Social systems, in particular, are characterized by homophily (Smith-Lovin, 2007). Outside their formal roles, do middle managers seek out ties to

those like themselves? Or do they seek out those unlike themselves? People with different characteristics are more likely to have new useful knowledge but it might be that influence, too, is a network and the influential people are tied to other influential people (Kleinbaum & Stuart, 2013). This is a somewhat more subtle question in its implications than it might seem. We have, for example, considered the role of political skill or social connections in building influence; we have also noted the seeming importance of familiarity with either internal operations or the external environment. A middle manager skilled at “issue selling” still needs an issue to sell – influence requires some object for its exercise. But does the influential middle manager sell his own ideas, or ideas collected from other nodes on the network?

If influential middle managers seek each out, the implication is that influence is a more subtle concept than we might think. This implies that influence is not simply a question of the last middle manager in the chain taking credit for information or an idea with a top managers. Rather, it implies that influence is recognized along the chain stretching from operations or the external environment to top management. Just as I hypothesize that the influential middle manager is an honest broker, I hypothesize that influential middle managers seek out other influential middle managers.

Hypothesis 5: Middle managers are more likely to be influential to the extent that they have ties to other influential middle managers.

Interactions

Part of the motivation for this research is to help move the middle management perspective beyond its implicit assumption of homogeneity in middle manager strategic influence. It is not the case that we can merely assume that each of the activities

identified by Floyd & Wooldridge (1992) is equally influential, or that all middle managers are situated so as to engage in each of these activities. In particular, in this research I am interested in the interplay of behavior and knowledge. This implies that some middle managers have access to particular information (e.g., internal operations or the external environment) and may be better suited to engage in strategic activities (e.g., championing and synthesizing). I therefore look at the interactions of behavior (synthesizing and championing) and strategic knowledge (internal operations and the external environment). Because there is no ex ante reasoning for suspecting that one type of interaction is more likely than another to lead to strategic influence, I test all of the relevant interactions:

Hypothesis 6: Strategic influence depends not simply on the main effects of a middle manager's strategic behavior (i.e., synthesizing, championing, integrating or facilitating) or a middle manager's knowledge of the external environment or internal operations, but rather the relationship between influence and behavior depends upon the middle manager's knowledge of the external environment or internal operations.

Methods

After the research described in Chapter 3, I continued to delve into the processes of strategy formation at a recently acquired division of a \$17 billion high-technology firm headquartered in the Northeast (the "Division"). On the basis of previous research, I was convinced that middle managers wielded real influence over organizational strategy, but that that influence was most often felt outside of the formal strategy review, which quite

explicitly was aimed at maintaining existing formal strategy. I was also convinced that informal networks – that is, well-established, pervasive and stable networks that were outside the formal reporting relationships set up by the Division – were key to understanding middle manager strategic influence. I determined to follow up on previous research by conducting a survey for the purposes of uncovering how middle managers in the Division understood the process of strategic influence. Unfortunately, after a change in top management at the Division, my access was ended due to concerns about the effect the research might have on employee morale given internal changes being made at the Division.

While I still had the cooperation of senior management, I was given contact and some employee information (title, department, supervisor and email address) for all of the middle managers based at divisional headquarters, approximately 135, as well as a list, with the same information, for all middle managers throughout the Division, wherever located. I defined “middle manager” as being at least two hierarchical levels below the CEO and one hierarchical level above operating managers (Wooldridge, Schmid & Floyd, 2008). Questions about a particular manager’s status were referred to me and resolved in consultation with the human resources department at the Division. A survey, developed in consultation with the Division (see Appendix A), was posted online at www.onasurveys.com. ONA Surveys specializes in network surveys, allowing for network specific questions. All middle managers at headquarters were invited to fill out the survey. The Division provided us with conference space for approximately a week on site to help middle managers complete the survey and answer any questions they might have. Senior management (the COO of the Division) sent an email to all middle

managers urging them to complete the survey while making clear that participation was entirely voluntary. Approximately half the middle managers (78) completed the survey at least in part and I received 49 complete responses, which provide the data for my analysis. After this, senior management at the Division changed and it chose not to allow me to continue with my research due to concern that the research would complicate internal changes they were contemplating.

Dependent Variable

My dependent variable is *Influence*. Each respondent was asked to choose from a list of all middle managers at the Division those he or she believed was able to influence the Division's strategy. For each of my 49 respondents, *Influence* is the sum of the votes received. Self-nomination was not allowed.

Independent Variables

Floyd & Wooldridge (1992) Typology: Because I am interested in which of the middle manager activities identified in the Floyd & Wooldridge (1992) typology are associated with strategic influence, in the survey I described each activity (Appendix A) and asked each respondent how often he or she performs each activity. The respondent was asked to indicate the frequency with which they performed each activity using a single five point Likert-type scale ranging from "I never perform these activities" to "I frequently perform these activities." Their response, centered, are recorded in the variables *Implement*, *Facilitate*, *Synthesize* and *Champion*.

Knowledge Base: Each respondent who nominated one or more middle managers as influential was also asked about the knowledge on which that influence was based:

knowledge of the external environment, knowledge of internal operation, contacts across the Division, political skill, a personal relationship with a top manager, or other. For each possible type of knowledge, the respondent was given a 5 point Likert-type scale from Strongly Agree to Strongly Disagree. The average score for each influential middle manager, centered, is recorded in the variables *External_Env*, *Internal_Ops*, *Contacts*, *Pol_Skill*, *Per_Rel* and *Other*.

Homophily: Do influential middle managers tend towards ties with each other? Using the Ucinet procedure Networks → Ego Networks → Egonet Homophily, I calculated a homophily measure for each respondent using Matches, “a measure of homophily that accounts for both the presence of homophilous ties and the absence of heterophilous ties divided by the total number of possible ties ($n-1$, where n is the number of nodes in the network specified by the input dataset)” (Borgatti, Everett & Freeman, 2002). This score is recorded in the variable *Matches*. This indicates the extent to which strategic influence flows from one influential manager to another, implying that there is a hidden “influence” network among middle managers.

Betweenness Centrality: Given the theoretical importance of information flowing throughout the organization, to what extent is there a connection between influence and a structural position among structural holes in a middle manager’s information network? To explore this question, I used the Ucinet procedure Networks → Ego Networks → Structural Holes for each middle manager’s ego network among those managers who supply them with information to do their job. Using each middle manager’s information network, identified by each respondent as being alters who regularly provide the respondent with information necessary to do his or her job, I calculated a score for ego

betweenness centrality. I use betweenness centrality because (1) it is highly correlated with a network position having many structural holes (Everett & Borgatti, 2005; Burt, 1992); and (2) based upon research suggesting that betweenness as measured with egonet data is closely correlated with measures of centrality in the global network (Everett & Borgatti, 2005). I used the respondent's information network (rather than their formal reporting network, advice network or social network) because of the theoretical importance of access to information if the focal middle manager is well situated in terms of filling structural holes. That is, information is valuable in trying to influence strategy only if it is not otherwise available to top managers (Shi, Markoczy & Dess, 2009). This variable is *Info_Ego_Bet* to symbolize that it is a calculation of betweenness centrality for each middle manager in their information ego network.

Honest Broker: Finally, given the importance of trust to brokerage and the ability to capitalize on information, I wish to know whether a given middle manager is an honest broker. Using Ucinet (Networks → Ego Networks → Honest Broker → Honest Broker Index), I generated a score for each respondent in their advice network. Deciding to take career advice from another manager is fundamentally an act of trust. I used a normalized score (due to the nature of the data and the assumptions of OLS regression) for HBI0. HBI0 is the most direct score for honest brokerage, reflecting situations where there are no ties between any of the alters connected by the respondent (Walther & Christopoulos, 2014). This score is recorded in the variable *Adv_nHBI0*.

Interactions

In order to test the interactions between middle manager upward strategic activity and knowledge of the external environment and internal operations, I created the

interaction terms *Int_OpsxSyth*, *Ext_EnvxSyth*, *Int_OpsxChampion* and *Ext_EnvxChampion*.

Controls

I controlled for a number of theoretically relevant and confounding variables. First, I controlled for sex, education and age, personal attributes that theoretically might affect whether middle managers are perceived by their peers as having strategic influence. It might be, for example, that other middle managers assume that women, all things being equal, are less responsible for observed strategic influence than the men with whom they work (Heilman & Haynes, 2005). Similarly, age and education might confound perceptions of strategic influence in respondents (Pappas & Wooldridge, 2007). Because my focus is on influence derived from knowledge of internal operations or the external environment (because, that is, I focus on strategic fit (Venkatraman, 1989)), I also control for other factors that might lead to strategic influence: influence derived from personal relationships (*Per_Rel*), political skill (*Pol_Skill*), contacts across the organization (*Contacts*) and other sources of influence that are not knowledge of internal operations and the external environment (*Other*). I do not mean to suggest that these sources of influence are not legitimate, but simply that they might be confounded with the knowledge upon which my theory focuses.

Table 4-1: Descriptive Statistics and Correlations

	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Influence	1.31	1.84																				
2 Female	0.24	0.43	-0.226																			
3 Age	47.61	7.05	0.064	-0.050																		
4 Education	3.63	1.15	0.232	-0.192	-0.347**																	
5 Contacts	--	0.49	0.333**	0.088	0.000	0.058																
6 Pol_Skill	--	0.94	0.402**	-0.117	-0.030	0.055	0.048															
7 Per_Rel	--	0.36	0.698**	-0.173	0.002	0.106	0.313*	0.289*														
8 Other	--	0.87	0.581**	-0.249*	0.035	0.297*	0.235	0.297*	0.323*													
9 Implement	--	1.09	0.072	-0.123	0.062	0.037	0.140	-0.252*	-0.030	0.068												
10 Synthesize	--	1.17	0.238*	0.061	0.003	0.344**	0.104	0.063	0.078	0.293*	-0.106											
11 Facilitate	--	1.03	0.238*	-0.223	0.28*	0.144	-0.142	-0.014	0.086	0.140	0.198	0.308*										
12 Champion	--	1.15	0.128	0.049	0.175	0.114	0.069	0.058	0.031	0.064	0.092	0.409**	0.383**									
13 Info_Ego_Bet	42.22	182.69	0.078	-0.111	-0.036	-0.305*	-0.020	0.129	-0.008	0.228	0.127	-0.126	0.000	-0.086								
14 Matches	0.22	0.27	0.094	-0.229	0.103	-0.019	0.029	0.016	0.069	0.150	0.194	-0.107	-0.145	-0.046	0.025							
15 Adv_nHBIO	0.15	0.25	0.129	-0.027	0.225	-0.153	0.223	-0.025	-0.053	0.077	0.171	-0.120	0.050	0.109	-0.133	0.263*						
16 External_Env	--	1.10	0.565**	-0.127	0.031	0.235	0.483**	0.288*	0.558**	0.617**	0.039	0.277*	0.085	0.019	0.005	0.069	0.170					
17 Internal_Ops	--	1.31	0.824**	-0.170	0.074	0.134	0.245*	0.324*	0.451**	0.44**	0.102	0.001	0.138	0.111	-0.032	0.256*	0.209	0.376**				
18 Int_OpsxSynth	0.00	1.37	-0.192	0.010	0.038	0.001	-0.154	-0.081	-0.058	-0.191	-0.165	0.068	0.108	-0.125	0.051	-0.327*	-0.204	-0.086	-0.603**			
19 Ext_EnvxSynth	0.35	1.24	0.074	0.179	-0.124	0.041	0.068	0.041	-0.074	-0.083	-0.066	0.155	-0.200	-0.104	-0.072	-0.184	-0.050	0.089	-0.080	0.423**		
20 Ext_EnvxChampion	0.02	1.20	0.068	-0.100	0.035	-0.032	0.032	-0.001	-0.023	-0.036	-0.069	-0.107	-0.263*	-0.448**	0.013	-0.081	-0.073	-0.100	0.037	0.228	0.39**	
21 Int_OpsxChampion	0.16	0.93	0.388**	-0.176	0.083	-0.042	0.110	0.145	0.052	0.080	-0.013	-0.180	-0.136	-0.38**	0.032	0.086	0.120	0.056	0.399**	0.046	0.272*	0.753**

Table 4-2: Results of Three OLS Models of Middle Manager Strategic Influence

	Model 1		Model 2		Model 3	
(Constant)	-0.339	(1.587)	0.210	(1.097)	0.711	(0.628)
Female	-0.116	(0.411)	-0.116	(0.260)	-0.094	(0.147)
Age	0.023	(0.026)	0.013	(0.017)	0.005	(0.010)
Education	0.156	(0.166)	0.146	(0.119)	0.088	(0.067)
Contacts	0.331	(0.368)	0.124	(0.250)	0.137	(0.138)
Pol_Skill	0.296	(0.191)	0.132	(0.122)	0.071	(0.067)
Per_Rel	2.580***	(0.519)	1.971***	(0.367)	1.804***	(0.236)
Other	0.660**	(0.227)	0.178	(0.176)	0.266	(0.100)
Implement			0.061	(0.104)	0.120	(0.059)
Synthesize			0.324**	(0.112)	0.348***	(0.065)
Facilitate			0.046	(0.127)	-0.098	(0.080)
Champion			-0.132	(0.104)	-0.061	(0.065)
External_Env			-0.101	(0.148)	-0.183*	(0.087)
Internal_Ops			0.843***	(0.100)	1.053***	(0.105)
Info_Ego_Bet			0.001	(0.001)	0.001*	(0.000)
Matches			-0.814	(0.415)	-0.620*	(0.237)
Adv_nHBI0			0.732	(0.474)	0.606*	(0.261)
Int_OpsxSynth					0.413***	(0.081)
Int_OpxChampion					0.370**	(0.128)
Ext_OpxSynth					0.031	(0.064)
Ext_OpxChampion					-0.286**	(0.089)
N	49		49		49	
Change in R ²	0.663		0.247		0.067	
Overall R ²	0.663		0.909		0.976	
Change in F	11.501		9.669***		19.755***	
Overall F	11.501		20.046***		57.583***	

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
(st. error)

Results

I analyzed by data using a three model OLS analysis of my dependent and independent variables using SPSS. Table 4-1 reports the descriptive statistics and Pearson correlations of the variables. Table 4-2 reports the results of the three models. Diagnostics were consistent with the assumptions of OLS regression. Because of the nature of network data for multiple networks, I examined my data for autocorrelation

issues, but found no reason for concern (Durbin-Watson autocorrelation statistic = 2.009). Examination of a P-P plot of the residuals does not indicate any basis for concern over the normality of the residuals (Appendix B).

My first two hypotheses have to do with the relationship between championing (H1a) and synthesizing (H1b) and strategic influence, positing that both activities are significantly related to influence. Only synthesizing, however, is significantly related to influence ($p < 0.001$). Thus, Hypothesis 1b is supported and Hypothesis 1a is not. It is worth noting that the regression coefficient of the variable Champion though not significant is negative. Championing is positively correlated with Influence (Table 4-1), although not significantly. A change of signs between correlation and regression can indicate excessive collinearity but tests of multicollinearity are reassuring (tolerance of collinearity is well within acceptable limits, with the lowest tolerance (the interaction of Internal Operations and Synthesis) at 0.477, well above the 0.1 limit at which collinearity might present a problem). Championing is correlated at statistically significant levels with Synthesizing ($p < 0.01$), and its negative β likely results from centering.

Can we say anything about which of these upward directed activities is a more important determinant of strategic influence? As noted above, championing has received quite a bit of theoretical interest in the strategy literature, although not much empirical research has been done. There can be little doubt that a middle manager who successfully champions a new strategic concept has influenced strategy. This activity, however, is inherently risky. A middle manager engaged in championing is engaged in telling top managers that they must change their strategy. We can thus surmise that championing is a high risk, high payoff venture. Synthesizing, on the other hand, is a

likely a lower risk, lower reward strategy for influencing strategy. In this role, middle managers monitor changes in the industry and the firm. By putting together information from a variety of sources, middle managers bridge gaps between different areas of the company and communicate this information to top managers in a form that already makes sense under existing strategy. Synthesizing, in other words, looks much like participating in a process of making existing strategy more efficient. Across middle managers as a group, it seems likely that influence comes more from synthesizing than from championing, although a successful episode of championing might result in greater change than the average episode of synthesizing. In a post hoc analysis, synthesizing did account for significantly more variance explained than championing ($p < 0.001$) and thus is arguably a more important predictor of influence (Tonidandel, LeBreton & Johnson, 2009, 2014). (The R script used to perform the relative weight analysis is attached in Appendix D.)

Hypothesis 2a is supported: knowledge of internal operations is a significant predictor of strategic influence ($p < 0.001$). Hypothesis 2b is unsupported: although knowledge of the external environment is significant, it is negative ($\beta = -0.183$; $p < 0.05$). At least in this sample, knowledge of the external environment reduces the likelihood that a given middle managers will be seen as strategically influential by his or her peers. This is an interesting result, although one that is not easy to explain given the importance of environmental fit in strategy. It is true that there is a higher variability in knowledge of internal operations ($sd = 1.31$) than knowledge of the external environment ($sd = 1.10$). This might indicate that there is more scope for middle managers to leverage knowledge of the internal environment, or at least more variability there. (It might, of course, also be

an artifact of this particular sample.) This result might also have to do with the nature of the Division; perhaps it is strategically more focused on its own operations than its environment. Wooldridge, Schmid & Floyd (2008) discuss how firms with different strategic types (using the Miles & Snow (1978) typology) might be influenced by different types of strategic activity.

Hypothesis 3 is supported ($p < 0.05$). Influence is directly related to betweenness in a middle manager's information ego network. Middle managers are more likely to be influential if they fill structural holes in their information network. Information traveling through the network must travel through influential middle managers because there are no (or only limited) alternate paths. The significance of Adv_nHBI0 ($p < 0.05$) supports Hypothesis 4, suggesting that influential middle managers are seen as honest brokers, at least among their advice network.

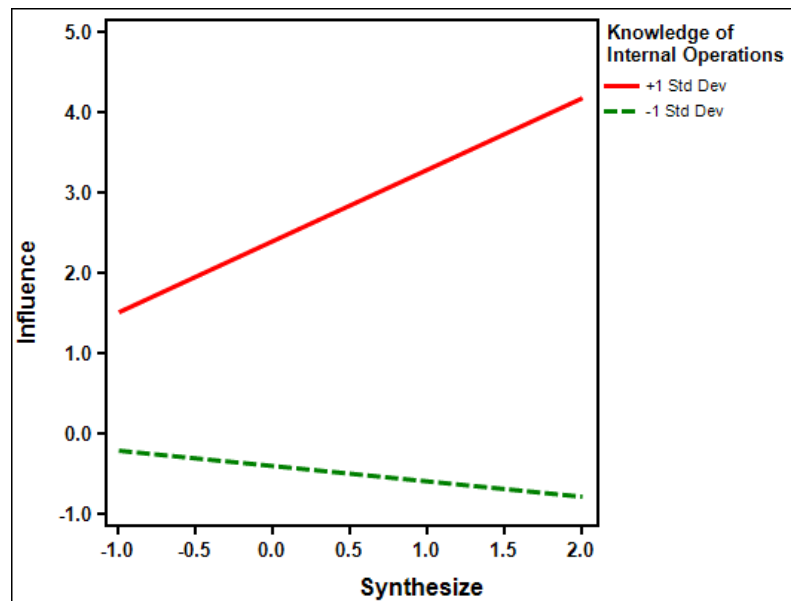
Matches, my variable testing homophily, is significant but negative ($\beta = -0.620$; $p < 0.05$), indicating that influential middle managers are more likely to form ties to middle managers with less influence than they have. This is contrary to Hypothesis 5. This may mean that influence is created by bridging the gap between top managers and other middle managers without influence (Burt, 2005). In this model, it is possible that influence comes not so much from the substantive managerial skills or knowledge of the influential middle manager but more likely from brokerage alone.

Both interaction terms involving knowledge of internal operations are significant, indicating that the relationship between influence and both synthesizing and championing depends upon knowledge of internal operations (Int_OpsxSynth, $p < 0.001$; Int_OpsxChampion, $p < 0.01$). At any given level of Synthesis or Championing, more

knowledge of internal operations results in more influence. The relationship between influence and knowledge of the external environment, on the other hand, is much more complex. There is no significant interaction effect for knowledge of the external operations and synthesis. More interestingly, the interaction of external operations and championing is significant but negative: championing based on knowledge of internal operations is associated with increased influence, championing based on knowledge of the external environment is associated with decreased influence. This is consistent with (and may simply be an artifact of) the negative but not significant link between the main effect of external environment and influence. It does not imply, I suspect, that knowledge of the external environment destroys influence, but rather shows the relative importance of synthesizing and knowledge of internal operations, at least in this sample.

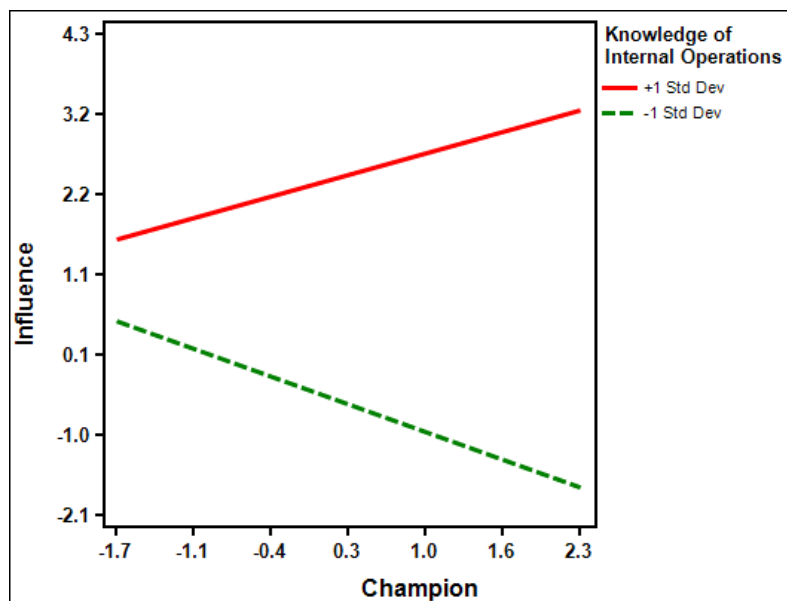
Figures 4-1 and 4-2 illustrate the interaction of knowledge of internal operations and synthesizing and championing, respectively. The interaction of championing and knowledge of external environment – which decreases influence in my sample – is not shown. Not only is it difficult to interpret this interaction, but the slopes are not significant at plus or minus one standard deviation, indicating that – though significant – it is likely not an important determinant of influence in the Division.) Indeed, it is worth noting that the interaction between Internal Operations and Synthesis (both of which have significant main effects) explains more than twice the variance ($r^2=.022$) than the other two interactions combined ($r^2=.009$).

Figure 4-1: The Relationship Between Influence and Synthesizing Depends Upon Knowledge of the Internal Operations of the Firm, Shown at ± 1



Standard Deviation.

Figure 4-2: The Relationship Between Influence and Championing Depends Upon Knowledge of the Internal Operations of the Firm, Shown at ± 1 Standard Deviation.



Discussion And Conclusion

I begin my discussion by emphasizing the limitations of this research. I am describing relationships observed among 49 middle managers, all employed at the headquarters of the Division. There is no generalizability – certainly in a statistical sense – from this analysis. My respondents were not drawn randomly from a larger population and due to the end of my site's cooperation, I cannot make any statements about how representative my respondents are even of the middle managers at the Division. Moreover, given my high r^2 (0.976) it is likely that – if treated as generalizable – influence is over-determined by my analysis.

Another important limitation is the possibility that my results were skewed by common method bias (Craighead, et al, 2009). All of the data in this study comes from the same instrument (Appendix A) and thus we must be concerned that the data has been skewed by the tendency of data collected by a single method to cohere. There are, however, reasons to think that the possibility of common method bias is itself limited: the independent variable (Influence) was collected from the surveys of middle managers nominating their peers as influential. The only other data collected from these same respondents about their influential peers was the perceived sources of their influence (knowledge of internal operations, knowledge of the external environment, contacts across the Division, personal relationships with top managers, political skills and other).⁴

⁴ Forcing respondents to explain influence using 5 point Likert scales rating influential middle managers on each of these six dimensions of influence accounts for about half the variation in influence explained in my research.

It is possible that, having nominated a middle manager as influential, the respondent was biased towards relatively high responses on one or more of the sources. Still, there were multiple sources of influence offered, some of which were not the subject of research but rather used as controls (contacts, personal relationships and political skill) and they were also given the opportunity to tie influence to some other unspecified source.

All other data points concerning individual middle managers were supplied not by the respondents who nominated a middle manager as influential, but by the middle manager about him or herself without knowing their score on Influence and without the ability to self-nominate. Moreover, the ego-network variables (Matches, Adv_HBI0, and Info_Ego_Bet) could not be known to the respondents at the time they completed the survey. Harman's (1976) single factor test, although a blunt instrument, did not reflect common method bias; it found seven factors, none of which explained more than half the variance (the largest explained 19.5% of the variance; the largest four explained approximately half the variance).

Despite these limitations, this study is a good foundation for future research. I have, for one group of middle managers, a very good model of what strategic influence means. This is a contribution on its own. The idea, for example, that synthesis is more a determinant of influence than championing is new in our literature, and should be useful to both researchers and managers in the future.

I also bring nuance to our implicit assumptions of homogeneity in research into the middle management perspective on strategy research. In particular, I focus on the conception of strategy as the degree of fit between internal resources and the external environment (Venkatraman, 1989, 1990). Although induced strategy is formulated and

legitimized by top managers (Hambrick & Mason, 1984), they cannot perform this task without the inputs of middle managers, who based upon their detailed knowledge of particular areas of internal operations or the external environment (Burgelman, 1983a), might see opportunities or threats that top managers miss. In particular, my results indicate that both synthesizing (as a middle management activity) and knowledge of internal operations are more important to strategy development and strategic renewal than our literature has heretofore recognized.

These findings also have implications for top managers and for practitioners generally. First, this research reminds us that organizations are, in large measure, a response to bounded rationality (Simon, 1947). Top managers are primarily responsible for scanning the environment and preparing the firm for the challenges ahead through decisions about investing in resources. But top managers cannot, themselves, keep track of all the relevant data inside and outside the firm; they must rely on middle managers to spot threats or opportunities. Middle managers, on the other hand, should pay attention to the strategic context of their own firm. In the Division where I did my research, it seems clear that knowledge of internal operations and synthesizing that knowledge to make sense of it in light of existing strategy is the most direct path to strategic influence. It is likely that other firms have other paths, but it is worth the time of middle managers to learn about their own best path to influence. Similarly, middle managers should think about their own ego-networks. Do they fill structural holes? Do they seek out managers who have access to information but might not otherwise have a path to top managers? Are they trusted? Top managers would likewise be advised to pay attention to how information flows throughout the firm.

My research also suggests a path forward for theory and future research. In particular, what empirical research there has been into middle manager strategic influence has tended to concentrate on championing or issue selling (Wooldridge, Schmid & Floyd, 2007; Schmid, Floyd & Woodridge, 2010; Rouleau & Balogun, 2011). Moving forward, my research suggests that synthesizing is worth paying attention to. Similarly, research into middle manager strategic influence has not previously focused on the relative importance of internal v. external knowledge. My research suggests that for middle managers, some level of external knowledge is important but that knowledge of internal operations is more likely to lead to strategic influence. (This also implies that top managers are keeping an eye on the external environment themselves and relying on middle managers to monitor internal operations.)

At a broader level, I would suggest that this research shows the value of pursuing a microfoundations research agenda in strategy process. On the one hand, I have not tied middle manager strategic influence to organizational strategy. But there are, on the other hand, suggestions in this research about the types of routines and individuals behaviors that can add or subtract from the incremental evolution of strategy and environmental fit. In some sense, from the vantage point offered by this research, the emphasis on championing in the literature and the lack of focus on synthesizing is odd. The heroic middle managers who through force of personality wrenches organizational strategy off the path approved by top management is a romantic figure, but how often can that happen. Synthesizing is much different. A synthesizing middle manager has done much of the legitimation work of strategy development by putting a suggested change in terms that align with organizational strategy. A championing middle manager might demand

that the organization “must” make some change; a synthesizing middle manager explains that the organization “should” make some change because the change is actually more in keeping with its strategy than the status quo. An influential middle manager is a middle manager to can talk to top management using their own terms. Both in terms of *praxis* and more quantifiable research, this is a fertile area for furthering our understanding of the cogs and wheels of strategy development.

I also hope that I have contributed to bringing network analysis to strategy process research. I am not the first to do so by any means (Pappas & Wooldridge, 2007), but there has been less work in this field than one might expect. Strategy development is an iterative, evolutionary process in which the success or failure of one change is used to help shape the next, while at the same time the internal resources of the firm are shaped by the external environment and vice versa. This is, in other words, a complex longitudinal social learning process. As network theory and the tools of network analysis improve to allow for more subtle measures and larger data sets – including testable predictions of how networks change over time – network analysis becomes more and more useful to the strategy process scholar. In other words, strategy process is a function of multiple networks within the firm; a qualitative tool measuring network function is a natural fit.

Finally, this research points us to the ultimate “pot of gold” in strategy process research: mapping complete networks of middle managers within multiple businesses. At that point, we will be able to test the effects of organizational and individual heterogeneity on firm performance. This paper should emphasize both the value and the difficulty of conducting such research.

CHAPTER 5

GENERAL CONCLUSION

*What we do see depends mainly on
what we look for. Lubbock (1892)*

What is this dissertation about? Does it make a contribution?

This dissertation is about tracing the roots of strategic change to the cognition and behavior of individual middle managers, keeping in mind that they are embedded within organizations, social networks and routines. My contribution is to begin to trace the cogs and wheels – the routines and individual behavior – that lead to strategic change. I also set the stage for future research tying the contingencies of middle management strategic influence to strategic change and then to organizational performance. Strategic change, particularly change meant to improve the fit of the organization's strategy with its environment and capabilities, has long been recognized as an important issue in strategic management research. Until recently, however, research into the fundamental processes and causes of strategic change (the "how" rather than the "why") has been limited. In this dissertation, I explore the how of strategic change.

Because I look at how, the scope of research and theory narrows. The organizational effect of better strategic fit is a question suited for broad answers: better fit leads to better performance. How these changes occur, however, is more fractured. There are a number of ways that organizational strategy changes, not all of which can be studied together. As research becomes more granular and focused, it becomes less universal and all-encompassing.

Unlike a traditional dissertation, which is meant to be one cohesive document from beginning to end, I have presented here three separate papers, one conceptual, one qualitative and theory building, and one qualitative. Each paper is designed to be published separately in a peer reviewed journal and thus each paper makes a separate contribution to our theoretical understanding of strategy process. This is, perhaps, somewhat more work up front and brings less natural coherence, but it has its advantages. My conceptual paper, for example, does not simply present the theory for my empirical work. Rather it is an attempt at a broader understanding of the antecedents of middle manager strategic influence than I could test empirically in this project. My qualitative paper was allowed to develop naturally from my research and led me in a direction that I would not have contemplated at the beginning of this project; I did not have to force my findings into a pre-conceived mold. As a result of all this, my network analysis in the third paper is a more organic product of my research agenda and surprised me with the findings I developed. I was not expecting the important role of synthesizing and internal operations in building middle manager strategic influence.

In the end, however, all three papers, though independent, remain strongly linked. The idea linking these three papers together is the heterogeneity of middle managers and of the organizations in which they are embedded. Middle managers have different attributes, skills and structural positions, and these differences influence their ability to change organizational strategy. This is a microfoundational view of strategy, seeking on the individual level for the mechanisms that drive organizational level results. I have therefore chosen to focus on a particular mechanism of strategic change. I look at middle manager involvement in strategy formation, and not just middle manager involvement but

upward divergent strategic change. I find this type of change interesting because it is relatively rare, because it depends upon both organizational and individual heterogeneity, and because it results from a social learning process that can be mapped and studied.

As I note in the third paper, the social learning perspective is that learning and socialization are one; that organizational learning can be seen as a function of information gathering behavior and the diffusion of that information throughout the organization. Thereafter, a type of sensemaking (Rouleau & Balogun (2011) speak of sense wrighting) synthesizes this information into coherence with existing strategy, which changes incrementally as the organization's context changes. This is a familiar story in strategy that informs theories about sensemaking, issue selling, strategic renewal and the microfoundations of strategy process. Without in any way attempting to overthrow this concept of strategy process as a process of incremental evolutionary change, I hope that in this dissertation I have made clear that strategy process is somewhat more complex. Strategy process depends upon managers (top and middle) with different interests, different skills and different structural positions. Moreover, we should not assume that all organizations are alike; strategy process in one might look much different from another. Traditionally, strategic management research, with its focus on organizational level causes and effects, has not had to delve into the complexity of individual organizations. We have, I submit, left that state behind. It is time to welcome heterogeneity and complexity into strategy process research, and to drive our research deeper, even at the cost of breadth.

APPENDIX A

HUMAN SUBJECTS REVIEW APPROVAL FORM

Isenberg School of Management Human Subjects Review Approval Form

Primary Investigator Name: David Cohen Project Title: Middle Management
Network Survey
Phone Number: 413-572-2241 email address: dcohen@isom.umass.edu

Please check the box that best describes the proposed research:

- ☐ The data obtained from human subjects can be easily disaggregated or will be reported at an individual level. Subjects will be informed of their rights in accordance with university guidelines and written consent is required.
- ☒ The data obtained from the research proposed will only be reported in aggregate, and procedures will be implemented to make individual subject identification highly improbable. Subjects will be informed of their rights in accordance with University guidelines but written consent will not be required.

In particular all subjects will be informed that they are not required to complete the research study, and student subjects will be informed that any course credit can be obtained through a non-research alternative of equivalent length and difficulty.

Please provide the appropriate supporting documents using the following checklist:

- ☒ CITI Training Course Completion Record (☐ check here if copy is already on file) [for information and to take the training, go to <http://www.umass.edu/research/comply/citi.html>]
- ☐ One page summary of the project, describing the research objective and sample of human subjects including:
- ☐ How they were obtained
 - ☐ Methods used
 - ☐ How consent will be gathered
 - ☐ How data will be safeguarded
 - ☐ Any potential risks to subjects
- ☒ Copy of supporting documentation including consent forms and any questionnaires or interview scripts.

I understand that any anticipated problems causing increased risks to subjects and any changes in procedure will be reported to the Human Subjects Committee.

Investigator's Signature: [Signature]

Print Name: David G. Cohen Date: May 17, 2012

*If research is conducted away from the UMass Amherst campus by faculty of other institutions, other signatures may be required.

Submit completed form to William Diamond, Chair of the Isenberg School of Management Human Subjects Review Committee

To be completed by the Isenberg School Human Subjects Review Committee:

☒ project is approved by the Isenberg Human Subjects Review Committee

Print Name U. ANTHONY BUTTERFIELD
ISENBERG SCH. OF MGMT.

Signature [Signature] Date 5/17/12

On behalf of the Isenberg School Human Subjects Review Committee

AMHERST, MA 01003-5310

Human Subjects Approval Form for 10/06/07

APPENDIX B

SURVEY INSTRUMENT



121 Presidents Drive, Amherst, MA 01003
Telephone: 413-545-5620 Fax: 413-545-3858
www.som.umass.edu

Thank you for taking this survey. We appreciate your time and effort. From everyone who completes the survey, 10 people will be chosen at random to receive Amazon gift cards worth \$50.00 each as a token of our appreciation. (About 140 people in Bedford are eligible to complete the survey.)

This survey is part of a research project investigating how businesses form and change their strategies. In particular, we are researching the role middle managers play in implementing and contributing to strategic change. To explore this idea, we are conducting a survey of your professional networks. Simply put, we want to know who you go to for advice about your job and who provides you with information you use to do your job. This will help us understand how information and ideas flow through RSA. We will also be asking some demographic questions and some other questions about your relationship with RSA to help us better understand our results. As discussed below, your answers are completely confidential.

In total, completing this survey should take about 15-20 minutes. If you wish, you can leave the survey at any time and return to it later. I will be at RSA, in the multifunction room off the Cafe, on Thursday, 6/13, and Friday, 6/14, to answer questions and help with survey completion.

RSA has very kindly allowed us access and has agreed to support your participation in this research project. This research, however, is being conducted by me and by other researchers at the Isenberg School of Management at the University of Massachusetts Amherst, not by RSA. RSA understands and has agreed that it will not have access to any raw data, or to any data from which it can determine who said what. Your survey answers will be entirely confidential. Any information presented to RSA or anyone else will be anonymized, aggregated and carefully screened to avoid giving individually identifiable information about you or your department, or about anyone else who completes the survey.

If you have any questions, please come see me Thursday or Friday in the multifunction room, email me at dcohen@isenberg.umass.edu or call me at 413-577-2241. If you would like to receive an summary of our findings, please check the box provided at the end of the survey and we will send it to you once our research has been completed..

Very truly yours,

David G. Cohen

Isenberg School of Management

UMass Amherst

dcohen@isenberg.umass.edu

As a participant in this study, you have certain privacy rights protected by federal law.

We are not aware of any professional or personal risks to you if you complete this survey. The survey and our methods of collecting and protecting the data have been approved by an Institutional Review Board at the Isenberg School of Management, which is empowered to protect the interests of people who participate in our research. If you have any questions, please email me at dcohen@isenberg.umass.edu.

If you have any concerns about your rights as a participant in this study you may contact the Human Research Protection Office via email (dabutter@mgmt.umass.edu) or by telephone (+1-413-545-5678).

The first set of questions below ask you whether you agree or disagree with statements about your relationship with RSA.

For each statement, please indicate whether you strongly agree that the statement describes your relationship with RSA, agree, have no particular reaction one way or the other, disagree or strongly disagree.

Remember: Your survey answers are strictly confidential.

1. When someone criticizes RSA, it feels like a personal insult.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

2. I am very interested in what others think about RSA.

☐ Strongly Agree ☐ Agree ☐ Neither Agree Nor Disagree ☐ Disagree ☐ Strongly Disagree

3. When I talk about RSA, I usually say "we" rather than "they."

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

4. RSA's successes are my successes.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

5. If a story in the media criticized RSA, I would feel embarrassed.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

6. When someone praises RSA, it feels like a personal compliment.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

7. I would be very happy to spend the rest of my career with RSA.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

8. I enjoy discussing RSA with people outside RSA.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

9. I really feel as if RSA's problems are my own.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

10. I think that I could easily become as attached to another company as I am to RSA.

☐ Strongly Agree ☐ Agree ☐ Neither Agree Nor Disagree ☐ Disagree ☐ Strongly Disagree

11. I do not feel like part of the family at RSA.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

12. I do not feel emotionally attached to RSA.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

13. RSA has a great deal of personal meaning for me.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

14. I do not feel a strong sense of belonging at RSA.

☐ Strongly Agree ☐ Agree ☐ Neither Agree nor Disagree ☐ Disagree ☐ Strongly Disagree

The next set of questions asks about strategy. Strategy, for our purposes, can be thought of as decisions about what markets to enter, what products or services to offer and how to create those products or provide those services. Managers contribute to strategy in four different ways, some of which are part of their formal job description and some of which are not. Please read the four brief descriptions below and then answer questions about each of these different strategic contributions.

A. Managers contribute to strategy by implementing strategic change. They communicate and sell new strategic directions approved by top managers to lower-level managers. They inject new strategic priorities into the business. They design and supervise action plans designed to meet top management objectives and translate business goals into objectives for their subordinates. Finally, they monitor activities within their unit to make sure that the unit is supporting the company's objectives.

B. Managers contribute to strategy by creating safe spaces within their own unit for experimentation and then evaluating the results of the experiments, encouraging some and discouraging others. For the right project, they will relax standard regulations and procedures, encourage multidisciplinary problem solving teams, and use unit resources to nurture promising unofficial projects.

C. Managers often apply strategic reasoning to emerging events and information, communicating their interpretation to others. In this role, managers monitor changes in the industry and the activities of competitors, suppliers, government and other outside organizations. This can involve putting together information from a variety of sources, bridging gaps between different areas of the company and then communicating this information to top managers.

D. Finally, managers can search out new strategic opportunities and try to sell them to top managers. This can involve justifying new or existing programs or processes to top managers.

15. How often do you perform activities described in Type A.

- ☐ I frequently perform these activities
- ☐ I often perform these activities
- ☐ I regularly perform these activities
- ☐ I rarely perform these activities
- ☐ I never perform these activities

16. If you could design your own job, how often would you perform activities described in Type A.

- ☐ I frequently perform these activities
- ☐ I often perform these activities
- ☐ I regularly perform these activities
- ☐ I rarely perform these activities
- ☐ I never perform these activities

17. How important do you believe the activities described in Type A are to your doing a good job in your present position?

- ☐ Of the Utmost Importance
- ☐ Very Important
- ☐ Important
- ☐ Somewhat Important
- ☐ Not at all Important

18. How often do you perform activities described in Type B.

- ☐ I frequently perform these activities
- ☐ I often perform these activities
- ☐ I regularly perform these activities
- ☐ I rarely perform these activities
- ☐ I never perform these activities

19. If you could design your own job, how often would you perform activities described in Type B.

- ☐ I frequently perform these activities

- ☐ I often perform these activities
- ☐ I regularly perform these activities
- ☐ I rarely perform these activities
- ☐ I never perform these activities

20. How important do you believe the activities described in Type B are to your doing a good job in your present position?

- ☐ Of the Utmost Importance ☐ Very Important ☐ Important ☐ Somewhat Important
- ☐ Not at all Important

21. How often do you perform activities described in Type C.

- ☐ I frequently perform these activities
- ☐ I often perform these activities
- ☐ I regularly perform these activities
- ☐ I rarely perform these activities
- ☐ I never perform these activities

22. If you could design your own job, how often would you perform activities described in Type C.

- ☐ I frequently perform these activities
- ☐ I often perform these activities
- ☐ I regularly perform these activities
- ☐ I rarely perform these activities
- ☐ I never perform these activities

23. How important do you believe the activities described in Type C are to your doing a good job in your present position?

- ☐ Of the Utmost Importance ☐ Very Important ☐ Important ☐ Somewhat Important
- ☐ Not at all Important

24. How often do you perform activities described in Type D.

- ☐ I frequently perform these activities

- ☐ I often perform these activities
- ☐ I regularly perform these activities
- ☐ I rarely perform these activities
- ☐ I never perform these activities

25. If you could design your own job, how often would you perform activities described in Type D.

- ☐ I frequently perform these activities
- ☐ I often perform these activities
- ☐ I regularly perform these activities
- ☐ I rarely perform these activities
- ☐ I never perform these activities

26. How important do you believe the activities described in Type C are to your doing a good job in your present position?

- ☐ Of the Utmost Importance
 ☐ Very Important
 ☐ Important
 ☐ Somewhat Important
☐ Not at all Important

Please choose from the list below middle managers working for RSA in Bedford who you believe are able to influence RSA's strategy because of his or her position within RSA, through political skill, or through a good personal relationship with a top manager (do not choose yourself, your boss or your direct reports). You can choose as many managers as you like, but typically there would not be many such managers within an organization.

When choosing names from the list, you can search for the name you have in mind, you can search through the list, you can filter the list by one of the categories provided, or you can type in any name you don't find on the list.

For each of the middle managers you've selected, please indicate the extent to which you agree with the following statements. These statements are not intended to be mutually exclusive; if for example a particular manager is influential both because he or she has good knowledge of RSA's internal operations and a good personal relationship with a top manager, you can rate both statements "strongly agree" or "agree."

1. This middle manager is able to influence strategy because of his or her knowledge of the external business environment in which RSA operates

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. This middle manager is able to influence strategy because of his or her knowledge of RSA's internal operations.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. This middle manager is able to influence strategy because of his or her contacts across RSA's various product lines and departments.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. This middle manager is able to influence strategy because of his or her political skill.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. This middle manager is able to influence strategy because of his or her good personal relationship with a top manager.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. This middle manager is able to influence strategy for some reason other than those listed above.

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

From the list below, please select people at RSA who regularly provide you with information that helps you do your job. By "regularly" we mean reliably and on an ongoing basis, but not necessarily every day or even every week. By "information" we mean data you need to complete your assigned duties. The next series of questions will ask about people you rely upon to give you job and career advice.

If you regularly receive information that helps you do your job from people outside RSA (colleagues at EMC; customers; suppliers; industry association contacts; media members, etc.), you can add their names in the small text box to the right of the larger box. Please type their names in the space provided (no one else at RSA will be able to see the names that you add).

When choosing names from the list, you can search for the name you have in mind, you can search through the list, you can filter the list by one of the categories provided, or you can type in any name you don't find on the list.

Please list people who regularly provide you with advice that helps you do your job (by "regularly" we mean reliably and on an ongoing basis, but not necessarily every day or even every week). This could be your boss or the people you manage, or it could be friends inside or outside RSA who are not formally connected to your job.

For people inside RSA, you can choose from the list below. For people outside RSA (colleagues at EMC; customers; suppliers; industry association contacts; media members, etc.), please add their names in the space provided (no one else at RSA will be able to see the names that you add).

When choosing names from the list, you can search for the name you have in mind, you can search through the list, you can filter the list by one of the categories provided, or you can type in any name you don't find on the list.

Please select the name of your boss (the person to whom you directly report) from the list below.

1. In your opinion, is your boss able to influence RSA's strategy, because of his or her position within RSA, through political skill, or through a good personal relationship with a top manager? (If the answer is "Yes", but for more than one reason, choose the reason you believe is primary.)

Yes, because of his or her position	Yes, through political skill	Yes, through a good personal relationship	Yes, but for some other reason	No
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. To what degree do you agree or disagree with the statement "I am able to influence RSA's strategy through my influence with my boss."

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

From the list below, please select the names of the people you supervise (your direct reports).

For each of your direct reports, please indicate whether each of the following statements is true.

1. In the past, my direct report has convinced me that RSA should change its strategy.

Yes	No
<input type="radio"/>	<input type="radio"/>

2. I rely on my direct reports to show me a needed change in RSA's strategy.

Yes	No
<input type="radio"/>	<input type="radio"/>

<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------

3. In the past, I have tried to influence RSA's strategy through the assignments and/or directions I have given to my direct reports.

Yes, successfully	Yes, unsuccessfully	No
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. In my opinion, my direct report is able to influence RSA's strategy through political skill or through a good personal relationship with a top manager other than myself.

Yes, due to political skill	Yes, due to a good personal relationships	Yes, for some other reason	No
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1. Are you male or female?

\n

2. In what year were you born?

3. What is the highest degree you have earned?

\n

4. I would like to receive an abstract of your findings.

☐

Many thanks for completing the survey. Your response has been recorded and you can close the browser window. If you would like to change your response just click on the email which included a link to this survey.

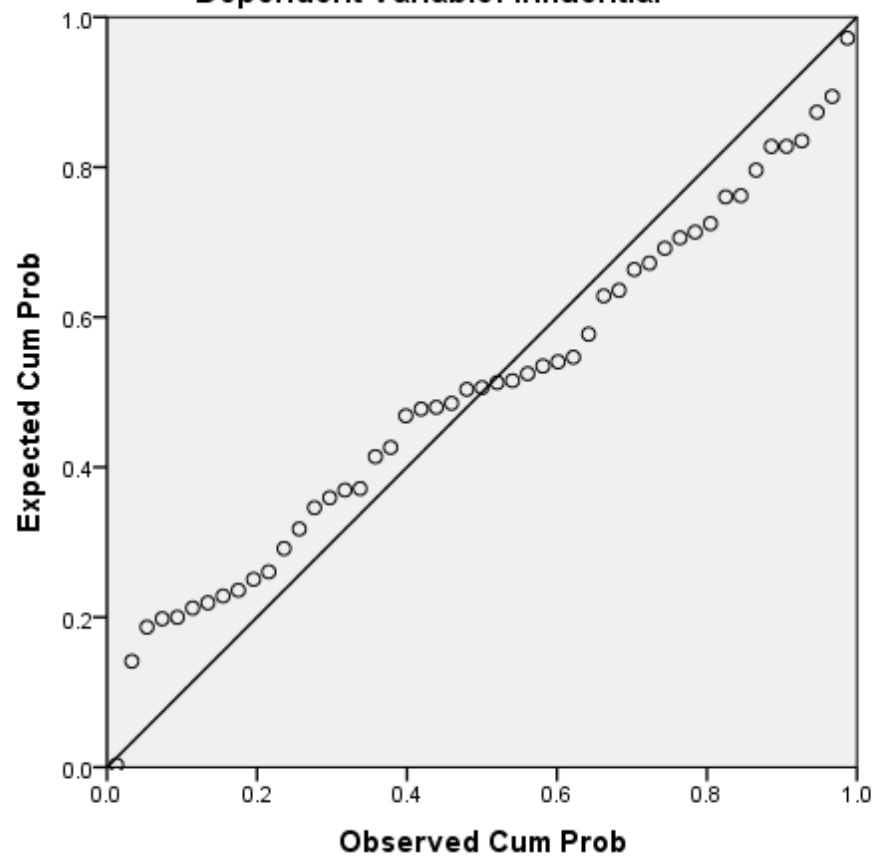
David Cohen

APPENDIX C

NORMAL P-P PLOT

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Influential



APPENDIX D

R SCRIPT FOR PERFORMING A RELEVANT WEIGHT ANALYSIS ON SYNTHESIZING

This script is based upon a script generated at <http://relativeimportance.davidson.edu> with modifications by the author (Tonidandel and LeBreton, 2014).

```
rawdata<-read.csv("rwadata.csv", header=TRUE)
attach(rawdata)
thedata<-data.frame(Influence, Female, Age, Education, Implement, Synthesize,
Facilitate, Champion, Info_Ego_Bet, Matches, Adv_nHBI0, External_Env,
Internal_Ops, Contacts, Pol_Skill, Per_Rel, Other)
Labels<-names(thedata)[2:length(thedata)]
multRegress<-function(mydata){
numVar<-NCOL(mydata)
Variables<- names(mydata)[2:numVar]

mydata<-cor(mydata, use="complete.obs")
RXX<-mydata[2:numVar,2:numVar]
RXY<-mydata[2:numVar,1]

RXX.eigen<-eigen(RXX)
D<-diag(RXX.eigen$val)
delta<-sqrt(D)

lambda<-RXX.eigen$vec%*%delta%*%t(RXX.eigen$vec)
lambdasq<-lambda^2
beta<-solve(lambda)%*%RXY
rsquare<-sum(beta^2)

RawWgt<-lambdasq%*%beta^2
import<-(RawWgt/rsquare)*100

result<-data.frame(Variables, Raw.RelWeight=RawWgt, Rescaled.RelWeight=import)
}

mcompultBootstrap<-function(mydata, indices){
  mydata<-mydata[indices,]
  multWeights<-multRegress(mydata)
  return(multWeights$Raw.RelWeight)
}

multBootrand<-function(mydata, indices){
  mydata<-mydata[indices,]
  multRWeights<-multRegress(mydata)
  multReps<-multRWeights$Raw.RelWeight
  randWeight<-multReps[length(multReps)]
  randStat<-multReps[-(length(multReps))]-randWeight
  return(randStat)
}

multBootcomp<-function(mydata, indices){
  mydata<-mydata[indices,]
  multCWeights<-multRegress(mydata)
  multCeps<-multCWeights$Raw.RelWeight
```

```

        comp2Stat<-multCeps-multCeps[5]
        comp2Stat<-comp2Stat[-5]
        Labels2<<-Labels[-5]
        return(comp2Stat)
    }

#bootstrapping
install.packages("boot")
library(boot)

mybootci<-function(x) {
    boot.ci(multBoot,conf=0.95, type="bca", index=x)
}

runBoot<-function(num) {
    INDEX<-1:num
    test<-lapply(INDEX, FUN=mybootci)
    test2<-t(sapply(test, '[', i=4)) #extracts confidence interval
    CIresult<<-data.frame(Variables,
    CI.Lower.Bound=test2[,4],CI.Upper.Bound=test2[,5])
}
myRbootci<-function(x) {
    boot.ci(multRBoot,conf=0.95,type="bca",index=x)
}

runRBoot<-function(num) {
    INDEX<-1:num
    test<-lapply(INDEX, FUN=myRbootci)
    test2<-t(sapply(test, '[', i=4))
    CIresult<<-data.frame(Labels,CI.Lower.Bound=test2[,4],CI.Upper.Bound=test2[,5])
}

myCbootci<-function(x) {
    boot.ci(multC2Boot,conf=0.95,type="bca",index=x)
}

runCBoot<-function(num) {
    INDEX<-1:num
    test<-lapply(INDEX, FUN=myCbootci)
    test2<-t(sapply(test, '[', i=4))
    CIresult<<-
    data.frame(Labels2,CI.Lower.Bound=test2[,4],CI.Upper.Bound=test2[,5])
}

myGbootci<-function(x) {
    boot.ci(groupBoot,conf=0.95,type="bca",index=x)
}

runGBoot<-function(num) {
    INDEX<-1:num
    test<-lapply(INDEX, FUN=myGbootci)
    test2<-t(sapply(test, '[', i=4))
    CIresult<<-data.frame(Labels,CI.Lower.Bound=test2[,4],CI.Upper.Bound=test2[,5])
}

multRegress(thedata)
RW.Results<-result

RSQ.Results<-rsquare

```

```

#Bootstrapped Confidence interval around the individual relative weights
#Please be patient -- This can take a few minutes to run
multBoot<-boot(thedata, multBootstrap, 10000)
multci<-boot.ci(multBoot,conf=0.95, type="bca")
runBoot(length(thedata[,2:numVar]))
CI.Results<-CIresult

#Bootstrapped Confidence interval tests of Significance
#Please be patient -- This can take a few minutes to run
randVar<-rnorm(length(thedata[,1]),0,1)
randData<-cbind(thedata,randVar)
multRBoot<-boot(randData,multBootrand, 10000)
multRci<-boot.ci(multRBoot,conf=0.95, type="bca")
runRBoot(length(randData[,2:(numVar-1)]))
CI.Significance<-CIresult

#Bootstrapped Confidence interval comparing 2 variables
#Please be patient -- This can take a few minutes to run
multC2Boot<-boot(thedata, multBootcomp, 10000)
multC2ci<-boot.ci(multC2Boot,conf=0.999, type="bca")
runCBoot(length(thedata[,2:(numVar-1)]))
CI.Predictor.Comparison<-CIresult

#R-squared For the Model
RSQ.Results

#The Raw and Rescaled Weights
RW.Results
#BCa Confidence Intervals around the raw weights
CI.Results
#BCa Confidence Interval Tests of significance
#If Zero is not included, Weight is Significant
CI.Significance
#BCa Confidence Interval Tests of significance
#Comparing one predictor with all others
#If Zero is not included, Weights are Significantly different from one another
CI.Predictor.Comparison

```

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